APRIL, MDCCCLX.

THE ZOOLOGIST:

A

POPULAR MONTHLY MAGAZINE

OF

NATURAL HISTORY,

AND

JOURNAL FOR RECORDING FACTS AND ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, ANNELIDES,
INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

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The Name, Paging, &c., of the 'Zoologist.'

From Benjamin Cooke, Esq.

The Editor of the 'Zoologist' says, that the consecutive numbering of the pages "has at last become cumbrous." To whom is it cumbrous? If to the editor or printer, I would, as a subscriber, willingly yield to a change; but if not, I would say, go on to 100,000! Being among the number of subscribers from page 1 to the present time, I give my vote for the continuance of things as they are. The 'Zoologist' for ever! hurrah! no change.—*Manchester*, *March* 3, 1860.

From Captain Hadfield.

I trust that the hints and remarks already tendered may induce the editor to let well alone; for with regard to the proposed alteration, I cannot for the life of me see what greater reason there is for changing the name of the magazine than that of its editor, as both are equally familiar to us; and so accustomed are we to his time-honoured name that few of us I fancy would like to hear of his having assumed that of "Woodcock" or "Partridge," unless assured there was a *substantial* reason for it.

With regard to the paging, it would perhaps have been as well, after reaching the 999th, to have commenced a new series; but as that was not done, the next best thing, to my mind, is to carry on to the 9999th page, before beginning *de novo!*

As to the "little corner," so much coveted by Mr. Maw, for the Botanist, it seems a modest request; but I have a misgiving that, if once allowed to take root, the exotic might, like a shrub I witnessed in the East, under the fructuating hands of the juggler, ere long so develope and expand as not only to fill its *allotted* space but endanger the *leaves* of the primitive plant! Or, to use an ornithological simile, i permitted to deposit their "little" egg in our nest, the embryo chick would soon breal forth, assuming such gigantic dimensions as to choke, if not actually smother, the more legitimate progeny.—*Ventnor*, *Isle of Wight*, *March* 3, 1860.

From the Rev. H. Harpur Crewe, M.A.

As a staunch Tory and Anti-Reformer, allow me to add my most energetic protes to those which have already appeared against any change in the name of th 'Zoologist.' I also most entirely concur in the advice of Mr. Gosse and my frien Mr. A. G. More that you should not think of changing the system of paging, at an rate till you arrive at page 9999. If you could in any way adopt Mr. Maw's mo useful suggestion and introduce a little Botany, I for one should hail its appearan with the greatest pleasure, and I am convinced it would increase the sale o the periodical.—*Ivy Cottage*, *Wickham Market*, *Suffolk*, *March* 6, 1860.

From the Rev. J. C. Atkinson, M.A.

I should be sorry to know the name had been changed, and the paging will not b more inconvenient than it is now for some time to come. I should have writte at once had I not been in some way prevented from knowing you had referre the matter. I suppose I am one of your oldest contributors, and don't yield to many in interest in the 'Zoologist.'—*Danby*, *March* 9, 1860.

Distance Swum by Red Deer.—On the 27th of October last a red-deer stag, of four points, landed on the north side of the Island of Muck, one of the Inner Hebrides, belonging to H. Swinbourne, Esq., R.N. The shepherd's family were startled by his belling. Unfortunately his dogs broke out, and chased the poor animal all night. In the morning he was found dead, though warm, his gallant heart being, as it was expressed, broken. He must indeed have been a noble animal to face the swim he so successfully, though unfortunately, accomplished. The nearest places on which red deer are kept are—the Island Rum, belonging to the Marquis of Salisbury, about ten miles distant; and Arasaig, belonging to Mr. Astley, about twelve miles distant. There are also red deer in the Island of Mull, more than twelve miles distant; but he could not have come from thence, as there was a strong wind right against him. From either Rum or Arasaig he might have shortened the distance by landing on the Island of Eigg; but Muck is two miles from Eigg, and Eigg is six miles from Rum and eight from Arasaig, and from either he must at all times have had a strong side-tide against him. The distances are local estimates, the existing charts being considered incorrect, and since hearing of the above I have had no opportunity of consulting them. I should be glad to learn well-authenticated instances of the distances stags have been known to swim. The late Colin Campbell, of Jura, mentioned to me that he believed there was a well-authenticated tradition of a stag having swum from Jura to the mainland, a distance of seven miles. The above I had from Mr. David Thornburn, the intelligent tenant of the island.—*William Robertson; Kintockmoidart, Inverness-shire.—From the 'Field.'*

New Mode of preserving Fossil Elephants' Tusks.—In No. 366 of the 'Field' there is mention made of the common occurrence of elephants' tusks, in all parts of England, in a fossil state; and a lamentation that only portions of tusks are seen, as the workmen in moving them break them to pieces, they being so brittle on account of a great portion of their animal constituents having been destroyed by the action of air and moisture, and only the mineral remaining. Now, if any of your readers should find a fine tusk, he may restore its hardness, partially, by pouring upon it a solution of glue (which the ivory sucks readily up), and by repeating this process the tusk will be most wonderfully restored both in appearance and strength.—***R. H. T. Gilbert; Kensington.—Id.***

[The exquisitely-carved ivory tablets obtained in a crumbling state from the ruins of Nineveh were perfectly restored and preserved, at the suggestion of Prof. Owen, by soaking them in a solution of gelatine at a temperature of 120°. They have thus become hard and perfect ivory again.—*Edward Newman.*]

The Stoat in Winter Dresss.—At the last meeting of the Zoological Society, Dr. Crisp exhibited a stoat in perfect winter dress. It had been killed in Suffolk. The change of colour here was more complete than in Mr. Bell's specimen, but the animal had been captured in a more northern county.—***E. W. H. Holdsworth; March** 7, 1860.*

Birth of two Bears at the Zoological Gardens, Regent's Park.—It is a very rare thing indeed that bears breed in captivity; and it is therefore with great pleasure that, through the kindness of the energetic and able Secretary of the Zoological Gardens, I am enabled to place on record the birth of two young bears on the Society's premises. In the bear-pit at the Zoological Gardens there are three bears,

BRITISH MUSEUM

viz., two females, one a brown European, the other a black American specimen, the male being also American. The mother of the cubs is the European bear, and they were born at the end of December last. At the time of birth, and for some days after, these curious little wretches were not larger than common rats, and their growth advanced very slowly; at their death, a few days ago, they were not much larger than a good-sized rabbit, but yet exceedingly vigorous, strong little rascals. The bear who had not young ones assisted for some time the mother in the care of her little family; but, thinking she might maltreat and injure them, the keeper shut her out of the den where the nest was made. She managed, however, to scratch under and push up the heavy iron grating, and, getting in to the cubs, killed both and partially devoured one, to the great grief of their mother and of all those who had seen them alive and well. Mr. Bartlett, the intelligent and obliging Resident Superintendent at the Gardens, has made close observations on these young bears, and read a paper upon them at the Zoological Society, Hanover Square. He stated that he has ascertained that the period of gestation is seven months, and that the animals are born towards the end of December. Now, in a natural state the mother-bear would at that time of year be in a state of hybernation, shut up snug and warm in some snow-covered cave, with very little food or nourishment, if indeed any at all. In captivity the nature of the animal is not changed, for Mr. Bartlett has observed that even before the birth of the cubs, and during the period the mother was suckling them, she took very little nourishment at any time. Coupling this fact with the remarkably small size of the animals when born, he imagines that bears naturally bring forth their young during the period of their hybernation,—a period when the mother is exceedingly fat, the milk being derived from the accumulation of fat which the bear always manages to pile up under her fur-clad skin before she goes into winter quarters. As regards this subject, the Rev. J. Wood, in that most interesting and carefully-written work, 'Routledge's Natural History,' when speaking of bears, writes as follows:—"The bear-cubs make their appearance at the end of January or the beginning of February; and it is a curious fact that though the mother has been deprived of food for nearly three months, and does not take any more food until the spring, she is able to afford ample nourishment to her young without suffering any apparent diminution in her condition." Mr. Bartlett has also ascertained a curious fact relative to the position of the teats in the mother-bear. There are six of these teats altogether; they are not placed upon the abdomen, but four upon the breast (upon the pectoral muscles between the fore legs or arms) and two on the lower part of the body (between the hind legs, in the same place as the udder of a cow is found). There is doubtless some good reason for this curious disposition of the teats, and it must have some relation to the habits of the animal in its wild state. It is just possible that this may be read by some gentleman who has hunted or observed bears in their natural wilds, and if he could kindly communicate his observations he would greatly oblige many persons who are interested in the matter.—*F. T. Buckland, in the 'Field.'*

Notes on the Duckbill. By George Bennett, Esq., F.Z.S., &c.*

On the morning of the 28th of December, 1858, I received a male and female specimen of the Ornithorynchus, alive; the male very large, and the female much smaller; they had been captured four days before the opportunity occurred of sending them. They were packed in a box with straw, carefully and securely fastened down; they had burrowed into the straw, and seemed warm and comfortable. When taken out and placed in a tub of water, they were very lively, diving down and remaining out of sight; and were so timid that when reappearing it was only to place the end of the mandibles out of the water to inhale some fresh air, when they would speedily disappear again, seeming to be perfectly aware they were watched. The longest time this animal could remain under water, without rising to the surface to breathe, was full 7 minutes 15 seconds, by the watch. I placed them in the evening in a tub of water with turf and grass; they remained quite tranquil, bubbles of air rising occasionally to the surface of the water alone indicating their position, with a movement as if they were shifting their place in the tub, but without showing the body. After some minutes had elapsed, the tip of the black snout would appear on the side of the tub, to the length of about an inch, or just sufficient for the nostrils to be above the surface of the water, they being at the same dilated as if to imbibe a supply of atmospheric air. They would only remain a few seconds, when they again speedily disappeared. When watched at a distance, one was seen to crawl out from the tub and escape upon the ground, but it was speedily captured and replaced. After leaving them in the water for about an hour, I placed my hand in the tub and took them out, and on replacing them in the box they soon burrowed down in the straw.

They are, as may be expected, fond of darkness and concealment, and dive under water or burrow under ground, coming to the surface to feed and enjoy themselves, principally at the dusk of the evening or at night.

I do not believe that the duckbill has ever been found in South Australia, no specimen having yet been brought from that locality.

These animals are rather crepuscular in their habits, sleeping for the most part of the day; and in captivity I have always found them very annoying at night, disturbing the rest of every one within hearing, by the scratching and restless noises which they make in their vigorous efforts to escape; whereas in the morning they will be found rolled up and fast asleep. Still I am now of opinion that all the Australian crepuscular and night animals,—judging from those I have been able to observe in captivity,—although very active, and feeding principally at night, will leave their places of concealment during the day, for a short time, for the purpose of feeding.

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* From the 'Proceedings of the Zoological Society.'

The male animal, as if to keep up its bird-like character, has a spur, moveable, like that of the barn-door cocks. This is found also in the Echidna, or porcupine ant-eater, another of the monotrematous family; but, judging from experiments on both animals, cannot be considered a weapon of offence or defence, and is for some purpose in the economy of the animal at present unknown to us. From my recent observations I consider the question of the spur in the male being a poisonous weapon as now decided; for the living male specimen, though very shy and wild, can be handled with impunity. Although making violent efforts to escape, and even giving me some severe scratches with the hind claws in its attempts, still either in or out of the water he has never attempted to use the spur as a weapon of offence. Indeed, the scratching I have before alluded to has not been done by the animal intentionally, as it is to all intents and purposes perfectly harmless; but accidentally by the hind claws, which alone are sharp, in the efforts made to extricate itself from my grasp. The female will float feeding upon the water, and is much tamer than the male. The latter keeps swimming about below, and it is a long time before he ventures to put more than the snout above the water, and then rarely more than the head and a little of the upper part of the body.

From the 29th to the 31st of December they were lively and well. I placed them for one or two hours in the water morning and evening, to feed and wash themselves, which they appeared to enjoy exceedingly. I placed some meat minced very fine in the water to try to feed them, so as to send them alive to Europe, as I considered the manner of feeding them an important preliminary step to ascertain. In their natural state they evidently feed in water. Just before I took them out in the evening they had burrowed to the bottom of the box, among the straw, very warm and comfortable, and they were cuddled close together.

On the third morning I found them much tamer, and, instead of diving down immediately they were placed in the water, they floated upon the surface. The female would permit me to look close to her little twinkling eyes; her ears were always much dilated, and she would remain tranquil even when I touched or scratched her head or back; but the instant I touched the sensitive mandibles she would either dip down partially or disappear altogether under water for a short time. The male is evidently much more timid. I have only once seen his body on the surface of the water; and when taking him out of the water and replacing him in his box, I found great difficulty in capturing him. The female, being generally upon the surface, is secured and placed in the box very easily, but the struggles of the male are very great, and this makes it more difficult to take him every time. The female paddles about on the surface, and occasionally performs summersaults in the water; the male sometimes comes up, but dives rapidly down again. The female floats upon the water without any apparent paddling, and remains in a sort of half-immersed position for a great length of time, with the beak lying flat upon the water. If any dust comes near the sensitive nostrils, a bubbling of water is seen to issue from them, as if to drive away the irritating substance; and, if this does not succeed, the beak is washed in the water to remove it.

January 1st, 1859. Both the animals this morning had a sleek, healthy and lively appearance; they did not require to be taken out of the box to be placed in the tub of water, but ran in themselves as soon as the lid of the box was opened. On entering the water they turned and gamboled about, and then reclined on one side, scratching themselves with the hind claws. They would permit me to touch them without being disturbed; indeed, they had become so tame as to allow me to tickle and scratch them gently, and appeared to enjoy it very much. They generally remained half-submerged in the water; it is only when touching the sensitive mandibles that they would dive down, but even then they would not remain long under water. Their favourite position was half-submerged, with the mandibles resting down upon the surface of the water.

The female is languid and weak, but the male continues vigorous, diving and swimming about. When in the water they play together, occasionally tumbling one over the other, and then remain on the surface of the water, gently combing their fur. No attempt was ever made (even when he growled at being disturbed) by the male to injure or even scratch with the spur. When I took the male out or disturbed him at night, he growled, and afterwards made a peculiar shrill whistling noise, as if a signal call to his companion. It is principally in the evening and at night that these animals are in the habit of coming out of their burrows to sport and feed both in the water and upon the banks. On retiring to their burrows to repose, they roll themselves up like furred balls.

January 2nd. The female appeared quite exhausted this evening. On being placed in the water, it paddled feebly about, and then, dropping its head, sank. On removing it I found it was dead. It appeared, on examination, to be in poor condition.

January 3rd. The male does not appear to be thriving, but I have now a large tub prepared for his reception, in which I have made the following arrangements. The tub is 3 feet 6 inches in length by 1 foot 9 inches broad, and 2 feet deep. At one end I have had a wooden enclosure made, which was partially filled with earth and a sprinkling of straw; this attempt to imitate the burrow was 12 inches deep and 15 inches in length. I then placed sand from a pond a few inches deep in the tub, in which I planted some fresh plants of Damasonium ovatum and other river plants from a pond in the Botanic Gardens. The tub was filled with water up to an inclined plane, which was turfed like a bank; a level space was also left, on which turf was placed, so that the animal might repose and clean himself on emerging from the water. On placing the male into it he dived down and seemed to enjoy himself very much. He was still lively, lying upon the surface of the water, and scratching himself, and again diving and swimming among the weeds; he then went upon the level bank and again plunged into the water: after remaining there for nearly an hour, sometimes upon the surface, and often for a long time under water, he found his way into the burrow, where he remained. I covered the whole of the cage with zinc wire, by which means he had light and air, and we could observe all his actions. This was to prevent his escape, as he could readily have climbed up the surface of the tub. There are openings at each end of the cask, by which means we could draw off all the dirty stagnant water and replace it with clean as often as was required. I fed the animal on meat minced very small, and then thrown into the water.

Both of these animals were captured in a net. The man who took them stated he had kept two alive for fourteen days, feeding them upon river-mussels, which he broke and gave them in the water; that they seemed to thrive very well; and that he supposed that they fed upon these mussels, as they had been in good health, their death having been occasioned by accident.

It surprises many why these animals, when captured in a net and left all night, are found drowned in the morning. It is my opinion that when one of these animals is captured in a net (as was the case with a male specimen taken in that way a short time since in the Mulgoa Creek, and found dead in the morning) it is entangled in the meshes, and, being unable to rise to the surface to breathe, is drowned.

January 5th. Last night I observed the animal emerge from the water and enter the burrow; this was about 11 P.M. This morning I did not see him in the water; he appeared yesterday evidently drooping and sickly, and I fear we have not yet got into the method of feeding them. Their food being minute and delicate it requires some experience to give it to these peculiar animals successfully. On opening the burrow the animal was not there, and on drawing off the water we found him stiff and dead at the bottom. Having, no doubt, been too weak to regain the burrow he perished when in the water. Thus ends the first experiment of keeping duckbills alive.

On dissection I found that they had been starved; there was no food or sand either in the intestines or pouches, nothing but dirty water. Should I procure other specimens it is my intention to introduce into my tank river-shrimps and insects of different kinds previous to placing them in it, so that they may obtain a sufficient supply of their natural food. Still all this will increase the difficulty of taking them to Europe, as the supply cannot be kept up at sea. They evidently are very delicate animals, and life is soon destroyed if nutriment is not rapidly kept up. The specimens were not emaciated in body before they died.

The testes in this male were very small, not being larger than peas. The animal was full-grown, and of the size of the largest specimens usually seen.

Sometimes I have seen the male with the spur so far thrown back and concealed from view as, at a glance, to be taken for the female, and when opened for anatomical examination to be mistaken for one, so that it is not improbable that the large testes resembling pigeons' eggs may have given rise to the notion of the animal laying eggs.

I have no doubt that the duckbills make their burrows high in the banks, so as to be out of reach of the floods which occasionally prevail. Although amphibious in their habits they require to repose on the dry land, and also to breathe atmospheric air at short intervals of time. Did they not adopt some plan of the kind, they would be destroyed or drowned in their burrows by the floods.

Another very young specimen was kept for three weeks, and fed upon worms; it had a rudimentary spur; it was very tame and easily fed by hand; it died on the 7th of February, and was preserved in spirits.

The plan I propose, besides introducing shell-fish, &c., is to feed them, in captivity, upon worms, and, if we succeed in keeping them alive in Sydney by that method for three months, to send them in the place of confinement, arranged as before described, to England, keeping them upon the same diet. At all events it is worthy of a trial; and, on quitting Sydney, I left the artificial burrow and other preparations with a person interested in the subject, in order that he might try the experiment.

I have remarked that when healthy these animals, on emerging from the water, are in the habit of cleaning and drying their fur, and seem to pay great attention to their being in a clean and dry condition, and appear also to be fond of warmth. Not long previous to the death of both these animals, I remarked that they did not dry or clean their fur, and I have no doubt that the chilliness produced by that circumstance accelerated their death, as the body—more especially in the male—was not so emaciated as would have been the case had death ensued from starvation.

The Two Jackdaws.—In the summer of 1858 my friend, Mr. King, of Melbourne, procured four jackdaws from four different nests, wishing to keep one only as a pet. Three of them were reared, one of which was presented to a neighbouring clergyman, another to a gentleman who lives on a farm on Melbourne Common (a lonely spot, probably a mile distant), and the third he kept for himself. The latter (a male bird) remained quite contented with his situation for about three weeks, at the end of which time he frequently absented himself towards the middle of the day, but came back to roost. This he continued to do for perhaps three weeks longer, when he was missed altogether. Some time afterwards tidings were obtained of him, and, singular to say, that, having crossed Melbourne Pool and a somewhat peculiar kind of country, he had made his way to the farmhouse on the common, and taken up his quarters with the other jackdaw, his old companion, who, by-the-bye, happened to be an individual of the "gentler sex." The two remained at the farm all winter, coming into the house, feeding together, and being very tame. In the spring of the ensuing year they paired, and at last built a nest in the dovecote, where the female would have laid (for the eggs in the ovarium were considerably advanced), but unfortunately, whilst feeding one morning with the fowls, a domestic hen (which had chickens, not liking the colour of Mrs. Jack's cloth) set upon and killed her. The cock still remains in his old quarters alive and well.—*From the 'Field.'*

The Magpie Nesting in Confinement. — A curious circumstance occurred at Barrow-on Trent, in Derbyshire, one of the very few instances of the magpie breeding in confinement, more especially in the manner described. Two persons in that village had each a tame magpie, one was a male, the other a female. It was agreed that a matrimonial alliance should take place between them, and consequently they were in due time introduced to each other. With a coyness becoming her sex, Miss Magpie received the attentions of her amorous suitor; but gradually her shyness wore away, and the pair were duly smitten with each other, or, in bird *parlance*, "paired." The birds were usually confined in a large wicker cage. As time wore on, Mrs. Magpie wished to take upon herself the duties of a family, and both birds commenced building a huge fabric of sticks within the cage. They went into the neighbouring gardens and fields and collected mud and sticks, which they brought to it; but a difficulty sometimes presented itself; the brought materials proved too large for admission into the cage. Bird ingenuity, however, suggested many novel devices to accomplish the end, and when not successful the owner of one of the birds gave them a little assistance. At last the roof-tree was put to the fabric, and it was "papered" with the most approved ornithological lining. Mrs. Magpie then deposited four eggs therein, two of which were duly hatched, and the young reared. But the fate of most pets awaited them; being guilty of numerous breaches of the correct principle of *meum* and *tuum*, they were brought to trial, and finally condemned to forfeit their lives for their offences—an unfortunate termination to a pretty ornithological drama. —*Id.*

Ornithological Notes from Norfolk: unusual Number of Hawfinches.—These singular birds have visited us, during the late severe weather, in far larger numbers than I have ever known before. Every winter brings a few specimens to be classed amongst the rarer visitants during frost and snow; but since the first week in December, 1859, I have seen upwards of thirty hawfinches, most of them in beautiful plumage, at one bird-preserver's in this city, brought in, from time to time, from all parts of the county. Besides these I have heard of several others that have been noticed frequenting lawns and gardens, exhibiting during the intense cold but little of their peculiar shyness, and happily escaping that indiscriminate slaughter which must have sadly thinned their ranks. The kingfishers in this neighbourhood have also suffered severely this season. During the intense frost between the 12th and 24th of December, when the rivers, drains and water-courses of every kind were thickly frozen, more than twenty of these beautiful little creatures, from one locality only, were brought into Norwich to be stuffed. Most of them were shot close to the water-mills, where the open water caused by the action of the flushes afforded the only chance of obtaining their finny prey; and several were picked up dead on the ice, frozen hard and stiff, and apparently starved to death. In one instance a kingfisher was seen to pitch down close to the bank of the river, and, rising again, fly off to a rail close by. The person watching this bird saw it attempt to swallow something, when it suddenly fell over backwards and was picked up dead. On being examined afterwards it was found to have bolted a small black shrew, which unusual morsel had evidently caused its untimely end, but showed how hard pressed these poor birds must have been for their natural food. The large number thus met with in one district is accounted for by the migratory arrivals that undoubtedly occur on our coasts during the autumn and winter. I have not heard of any more waxwings since my last notice, and have only heard of one small flock of crossbills having been seen, of which a pair were shot on the 5th of January. During the heavy gales in December several little auks were picked up dead in various places along the coast, but none, as is sometimes the case, far inland. A few days since, however, a solitary dunlin sandpiper was picked up dead under the telegraph wires at Cringleford, about a mile and a half from Norwich. This wandering Tringa, thus strangely out of his latitude, was probably dashed against the wires during the gale, having been carried away more than twenty miles from its natural haunts by the sea. A fine adult male of the black-throated diver, with the throat white, was shot on Barton Broad about the 28th of January, and two or three redthroated divers, but all immature, have also occurred. A female redbreasted merganser and three female goosanders appeared about the same time, but no male birds of either species have been met with to my knowledge.—*H. Stevenson; Norwich, February* 16, 1860.

Wood Pigeons in Paris.—During a fortnight's visit to Paris, in November last, I was rather surprised to find that wood pigeons frequented the gardens of the Tuileries in considerable numbers. Every evening, from my rooms in the Rue Rivoli, I saw from ten or a dozen to about twenty birds on some three or four trees, as if settled for the night. They were often to be seen, in the trees or on the wing, during the day, occasionally flying within a few feet of the numerous pedestrians like tame pigeons. That a bird so shy and wary as the ring dove should thus adopt as its haunt a large city, swarming with a bustling population, affords, I think, a strong proof of the readiness with which some of our wildest birds would live on social terms with us if we would afford them protection, or at least abstain from persecuting them. I have several times seen (or heard) wood pigeons in Kensington Gardens, but not, I think, in the winter, and they always kept well out of shot distance, never evincing the familiarity of the Paris birds.—*Henry Hussey; 7, Hyde Park Square, February* 25, 1860.

Wild-fowl in the London Ornamental Waters.—Having for several years paid particular attention to the aquatic birds in the different London waters, I have often seen there wild-fowl (as they are commonly called), of some four or five species, with perfect wings. As no wild bird, with its powers of flight unimpaired, would be likely to stay for half an hour after it was turned out in any of these waters, I have always supposed that these birds must be London bred, that is, hatched in the Zoological Gardens (or perhaps in the Regent's or St. James's Park), and that they merely staid in town for the season until their migrating time came. Some of your correspondents can perhaps enlighten me on the subject. I have notes of the following birds with perfect wings, when and where seen:—

1851: July. In the Serpentine. A male wigeon.
1852: February. Round Pond, Kensington Gardens. A female wigeon.
1853: December. Lake in the Regent's Park. A male wigeon.
1854: March. Pond in the Botanical Gardens, Regent's Park. A pair of gadwalls (male and female) and a pair of shovellers (male and female).
„ February. Ditto. A male wigeon.
1856: February. Regent's Park Lake. A male wigeon.
„ February, March and December. Botanical Gardens. A pair of hybrid wigeons (mallard and wigeon), male and female.
„ December. Regent's Park Lake. A female tufted duck.
1857: February. Botanical Gardens. A male gadwall.
1858: January. St. James's Park. A male gadwall.
1859: January. Regent's Park. A female hybrid wigeon (mallard and wigeon).
„ April. St. James's Park Canal. A male gadwall and a whitefronted goose.
„ December; and February, 1860. Ditto. Two male gadwalls.
1860: January. Ditto. A ferruginous (or whiteeyed) duck
1859: December; and January and February, 1860. Regent's Park Lake. Two male hybrid and one female hybrid wigeons.

From the above list it will be seen that a male wigeon, and in all probability the pair of hybrid wigeons, remained in town during the summer. Several years ago, when rude huts or platforms were erected in the Round Pond, Kensington Gardens, for the water-fowl, a male wigeon with perfect wings frequented the pond for two, if not more, years. One year he paired with a duck, somewhat darker in colour than a common wild duck; and I saw three of his progeny when about one-third grown. About the same time a pair of waterhens frequented the pond, breeding every year in one of the above-mentioned huts. The latter birds seem to me to be far less numerous in the London waters than they used to be. The boats have driven them entirely from the upper end of the Serpentine. I once counted seventeen waterhens feeding together near the inner circle in the Regent's Park. Previous to the introduction of the boats a small party of tufted ducks (nine birds, I believe) used to frequent the Serpentine, flying to and fro between that water and the canal in St. James's Park. I have frequently seen tufted ducks on the wing, long after migrating time, on both the above waters, but not of late years; and I never saw any young birds. It seems singular that a migratory bird, with full powers of flight, should remain during the summer in a place where it has no facilities for breeding. The conclusion I draw from the above and other facts is, that the wigeon and tufted duck might easily be semi-domesticated in places adapted to their habits; that they might be made quite as gentle as that familiar but most independent bird, the waterhen; and that the epithet "tame" is far more applicable to them than to the mute swan, which, as far as I can learn, will never stay at home unless he is crippled. Can any of your correspondents give a well-authenticated instance of young mute swans, with their powers of flight unimpaired, and at liberty, remaining in this country after the migrating period?—*Id.*

'*The Wild-fowler.*'—Mr. Folkard, in the above work, after describing the shoveller as a "diving" duck (p. 259), proceeds as follows:—"None of the species of shoveller can be recommended for culinary purposes." Now, as is well known to ornithologists, the shoveller is a surface-feeding, and not a diving or "oceanic" duck, and so far from being unfit for the table it is one of the best, if not the very best, of the edible ducks. Audubon, as quoted by Yarrell, rates it above the far-famed canvas duck. Colonel Hawker testifies to its excellence, and I think myself that it is superior to the pintail, excellent as that bird is. According to Yarrell there is but one species of shoveller known in England. Mr. Folkard's shoveller cannot therefore be the true bluewinged shoveller known to ornithologists, the Anas clypeata of Pennant and Montagu, and the A. rhynchaspis of Gould, but some other bird. Mr. Folkard does not mention the goldeneye or tufted duck, both well known on our coasts, and the latter one of the commonest of our wild-fowl. Can it be that on the Essex coast, where Mr. Folkard's shooting operations seem to have been chiefly carried on, these birds are called "shovellers"? A literary and "learned" sportsman ought not to be misled by provincial names, often absurdly incorrect. However the mistake arose, the author ought to correct it in his next edition, if he expects his book to supersede Colonel Hawker's. However much behind the modern march of intellect the Colonel may be in his shooting instructions, his ornithology may be depended upon.—*Id.*

Wild Swans on the Coast of China.—I had often heard talk of the swans seen and shot on the Foo-chow river Min, which some sportsman assured me were of two kinds, the white and the black. The black I of course attributed to a little imaginary colouring on the part of my informants, gray being implied, and the birds alluded to being in all probability the yearlings of the white kind. Some have also assured me that swans are sometimes seen in the Chang-chow river here; but notwithstanding all my endeavours I have failed to get a glimpse of these rare monster game until this winter, when by some extraordinary luck, a few weeks ago, I received from a friend at Shanghai a pair of wild swans caught in that neighbourhood, which he informed me were large "wild white geese." Of course I could say nothing against the natural blunder of my friend when I had been so enriched by his exertions. The next thing was how to keep them alive for a few days, to watch their habits; but alas! Amoy is the last place to bring live swans to, unless one wishes to see them frolic among the shipping; so I was obliged to condemn them to my narrow court-yard, scarce more extensive than a London area; and in this prison I sedulously watched the dull habits of these once snow-white creatures, now reduced to as dingy a hue as any other gaol-bird. Their wings had been cleverly tied by passing a string round the first wing-bone and across the back, and thus kept the birds from using them too freely. Often as I have watched from a window above, I have seen them stalking awkwardly about the yard, the female always following the male. They would sometimes stand close together, and the female coaxingly rub her head and breast against the male, uttering all the while her plaintive notes, to which the male sometimes responded in a deeper key. These sounds were produced by the bird rounding her neck, lowering her head towards the breast and then raising it quickly again. The notes produced might be syllabled "co-co" uttered in a most melancholy tone, and were not unlike the wind escaping from some long brass instrument. The female was most constantly uttering the chaunt, consisting at times of two, at others of three or more notes, and continued it through the greater part of the moonlight nights. Often, while in my room in the upper story of the house, this plaint has recalled to my mind the notes of the distant hoopoe, or the less pleasant music made by some antiquated window swinging in the breeze on its rusty hinges. When suddenly approached the birds would both utter a loud "cow-cow," pronounced like the treble bark of some snappish cur, and, uplifting their necks, they would stand defiant, giving hoarse hisses; but if the hand were boldly put forward towards them they curved their heads and tried to escape. When taken up they would kick and throw the neck about violently, making a loud and shrill cackling noise, which might be heard at a great distance. It is evident from my observations above that mine possessed the same peculiar habits and cries as the wounded female of Cygnus ferus spoken of in Montagu's 'Ornithological Dictionary;' but my birds I have ascertained to belong to Cygnus minor, *Pallas* (C. Bewickii, *Yarrell*). Therefore, either the wild swan assimilates Bewick's swan in habits, or, what is more probable, Montagu was describing the female of C. Bewickii, which at that time was not distinguished from C. ferus. Dr. Schlegel, in the 'Fauna Japonica,' mentions a C. musicus *vel* ferus from Japan. Now, it would be worth while to ascertain if this statement is not a mistake, as I feel pretty confident that the wild swan on this coast belongs only to one species, the C. minor of Pallas. At all events the pair examined by me answer in every respect to the description given in Yarrell of C. Bewickii. After the death of the female the male was never heard to utter a sound of any kind; he held himself very erect and looked melancholy, continuing to refuse all food until nearly reduced to a skeleton; his legs yielded under him, and death put an end to his miseries.

CYGNUS MINOR, ♂.

Length 3 feet 9 inches. Wing from curvature 1 foot 7 inches. Bill from base of culmen to the tip 3 inches 4-tenths, frontal protuberance ½ inch; lower mandible 3 inches 4-tenths; bare extent of skin from top of eye to end towards nostril 2 inches 3-tenths, fine bright yellow, deeper than lemon; this colour also stains the naked skin that encircles the eye. Bill black, as also are the legs. Naked portion of tibia 1 inch 1-tenth; tarsus 4 inches; mid-toe 5 inches 2-tenths, its claw 7-tenths. Plumage white, with orange-brown speckles on the head and neck.

This bird was in every way superior in size to the female, and its sternum was vastly more developed. The trachea runs the whole prescribed length, nearly 6 inches, between the bone-plates of the sternum, and makes the horizontal loop described by Yarrell. The cœca were given off at about 6½ inches from the anus, and measured, the right one 11 inches, the left 12 inches: they were enlarged into leech-like ends.

CYGNUS MINOR, ♀.

Length 3 feet 3½ inches. Wing 1 foot 7 inches. Bill along the culmen 3½ inches, from the angle of the eye 4½ inches, depth 1 inch 8-tenths, black; skin at the base over the ridge, round the eye, but not reaching the nostril by ¼th of an inch, fine deep lemon-yellow. Inside of mouth purplish. Legs black; tarsus 3 inches 5-tenths; mid-toe 4 inches 3-tenths, its claw 7-tenths.

The trachea, instead of as in the male, enters the crest of the sternum, and progresses only a distance of 2 inches 2-tenths, leaving a cavity of 2½ inches, with a small up-turned plate inside at the end of the keel. The loop therefore is vertical, the trachea so soon bending on itself and making its exit to enter the thorax. Now, Yarrell and Macgillivray both distinctly state that the female, in points of anatomy, is similar to the male. We must therefore conclude that the lady was the second or third wife of the gentleman; but there is nothing in their external appearance to warrant this belief, excepting size, for both are equally white, and the superior osseous development of the male's body, which appears on dissection, might easily be attributable to sexual difference.

It will be seen, however, that C. Bewickii, instead of being limited to Iceland and other places on the western side of the old hemisphere, is equally found on the eastern side. It is known in Chinese works as the Hai (sea) Yen, but is a stranger to the natives of this part.—*Robert Swinhoe; Amoy, December 23, 1859.*

Notes on the Mountain Birds of Jamaica.

By W. OSBURN, Esq.*

"Agualta Vale, Metcalfe, Jamaica,
January 20, 1860.

"My dear Sir,—By far the most considerable of the 'rivers' I alluded to in my last as forming so remarkable a feature in the scenery of Metcalfe is the one which reaches the sea through this beautiful little valley. A good many Spanish names still adhere to their old localities hereabouts, but I never heard the name 'Agua Alta' applied to it, except in maps; and it does not seem very clear why the old colonists should have chosen it for a stream two or three feet deep, unless it allude to its floods, when it would be very appropriate indeed. But the English name, the 'Wag Water,' expresses* exactly its winding tortuous course at all times, as it threads its way through many a gloomy gorge for some thirty miles from the mountains of St. Andrew's. At its entrance into the valley here, it is really nothing more than a lively bright little mountain stream. The lofty hill of shale, which here forms the western bank, is topped by an overhanging brow of red conglomerate, rendering the dense forest beneath it still more gloomy. The trees grow on the steep slope, amid huge angular fragments of the same rock, some of which have rolled into the river below. Beneath these the Wag Water delights to scoop out its shingle into deep holes, in whose blue-green depths the mountain mullets love to lurk. This hill is succeeded by another, rounder and of shale alone, towards the base of which the overseer's house is built. It forms, in some sort, the head of the valley, for the rounded shale hills which continue to follow widen the valley by receding westwards as they diminish in height till they sink into the belt of swamp I have before alluded to.

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* Communicated by P. H. Gosse, Esq., F.R.S.

"The eastern limit is formed by the spurs of a shale peak of considerable elevation. Towards the river they terminate suddenly in precipices, whose bare brown heights tower amid the trees and jungle that cling about them. Their surface must constantly be renewed by the crumbling of the shale, as not one of the numerous plants which so readily drape and festoon such situations in the tropics seems able to hold the ground. The river-shingle extends to their base, and the floods doubtless greatly aid the process. These spurs, as they succeed each other obliquely to the river-course, fall back to the eastwards, till one advancing further than the rest shuts in the view in this direction. Thus from the overseer's house opens a valley about two miles in length and half a mile across. The rounded shale hills are covered by the coarse guinea-grass I have mentioned, now dry and brown, dotted with the sombre rigid tufts which the great macaw palm (*Cocos fusiformis*) rears on its armed stem; or the hollows are choked with the numerous hardy shrubs which take immediate advantage of slackened cultivation to gain possession of the soil. Among these the logwood (*Hæmatoxylon*) and an Acacia or two hold a conspicuous place. Guinea-grass and bush are more mingled on the steeper hills to the east, but they have long been cleared of the ancient forest; and uninterrupted lines of bamboo from base to summit are the durable

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* I believe, however, that "Wag-water" is but an English corruption of Agu' alta; just as Bocâgua, on the Rio Cobre, has been corrupted to "Bog-walk."—P. H. G.

remains of a culture now long neglected. The valley is terminated by a line of dark green, the rank vegetation of the swamp. Over this tower the cocoa-nuts, growing on the banks of sea-shingle I have described; above these a blue segment of the Caribbean, across which rise the masts of a vessel at anchor in Annotto Bay; as she swings to the wind these last appear as one, so that the valley must be nearly N.E. and S.W., and down it rushes the fierce sea-breeze the whole day long. But the bright little river is the chief object; for, what is remarkable in a Jamaica stream, no trees fringe its course, and it is thus visible sparkling over its shallows, or its blue surface ruffled by the sea-breeze, save where its own perpetual windings hide it behind its banks.

"The valley seems once to have consisted wholly of an alluvium (the morass may have extended up it), a rich valuable soil, and the portion now remaining is covered with waving squares of sugar-cane or rich pastures, sparsely dotted with trees, chiefly the fiddlewood (*Citharoxylon*) and a beautiful tree called by the negroes 'yoke-wood;' here it abounds, but I have met with it elsewhere, but where it seemed planted; it is now covered with a profusion of flowers, larger than, but of the colour of, apple-blossoms, succeeded by narrow pods two feet long: it is a Bignonia, and, as I believe B. leucoxylon; I have heard it called also 'Spanish elm,' and it is very like an elm in shape when its growth is undisturbed, but in nothing else, for its foliage is a soft gray-green. This alluvium now occupies only about one-third of the valley—the rest is the Wag Water's own. Close to the base of the shale precipices of the eastern bank is a narrow line of swamp, showing plainly the river once flowed there. Between this and the river lies a tract of shingle. Lower down still the road crosses a crescent-shaped pond, now grown up, all but the fording, with reeds, and much frequented of Rallidæ. This was the river-bed only three years ago; now by a sudden bend it is working away at the bases of the western hills, half a mile off, with what success the prostrate trunk of a huge cotton tree tells plainly. The many acres of land included between these shifting courses is deeply covered with shingle; the floods bring down the former soil, being completely washed away, to the great detriment of those interested in its cultivation. Where this shingle has been long undisturbed a herbage gradually covers the hungry soil, but not very profitable, it would seem, as pasturage. The limit of the floods is marked by a scanty vegetation of a very peculiar nature, whilst the recently-formed shoals lie bare and gray, a broad margin on which nothing will grow.

"It is to these two last, forming a tract of varying breadth, but often of considerable extent, and to the birds which frequent it, I would devote the present letter. The plants which sparsely occupy such a soil must often 'spring to perish there,' but at the best they must be able to get a firm hold of the loose shingle, to bear submersion beneath the turbid and rapid waters for some time, and then half-buried in loose stones and loaded with drift, and still able to recover themselves. One of the most abundant of these is Cleome heptaphylla, whose irregular white flowers seem always in bloom. Little tufts of the common Mimosa pudica and Æschynomene americana, both in differing degrees sensitive, are numerous. Amaranthus viridis, common everywhere, here holds its ground in green patches, without beauty of any sort; but the Amaranths have a gay representative in a species whose bright purple calyces and bracts collect into a spike—brilliant bits of colour against the cold gray of the stones amid which they grow. The horses' hoofs, in crossing little clumps of herbage, produce a rattle singularly metallic, considering its source—the dry seeds of various species of Crotalaria loose within the dried and inflated pods. C. retusa is a common weed, though its spikes of large yellow papilionaceous flowers make it very ornamental. With C. verrucosa, here equally common, the flowers, scarcely less, are a purplish blue. C. striata rises to a bush three or four feet in height, but the flowers are insignificant; and this list might be extended with many others. As seems very commonly the case with plants in barren, exposed situations, though sometimes stunted in growth, the seed is produced with unusual profuseness; hence, at this season, the shingle is frequented by numerous flocks of Spermophila olivacea and bicolor. I may remark that if these little birds ever really cease building nests and rearing young at all it is during the first two months of the year. The flocks at this time are more numerous, and numbers of the adult males, with distinguishing orange or black, appear among them; but the autumnal flocks do not seem to exceed five or six, and then, as I have often noticed, there is no adult male with them, which would look as if they were broods of young. They certainly breed, however, as late as the end of October and beginning of November. In quest of the same abundantly-supplied food are numbers of your Coturniculus tixicrus, a very universally distributed little bird, as the last. I found it abundantly in the pastures round Freeman's Hall, than which a locality more diverse from this can scarcely be. This pretty sparrow rises, takes a short flight, and drops suddenly a few yards off, or will sit watching on a low twig without any fear.

"At this season, in numbers not much less, is the pretty Sylvicola, the males of which have now the indications of the deep chesnut crown which becomes fully developed in spring, and which seems evidently the one you have identified as Sylvicola æstiva. I saw them very rarely on the tertiary limestone, but in Vere, where there are many barren dry tracts similar to this, they were common. I left it in Vere in April, and found it here again in October. It is a very lowly species in habit, hopping constantly on the shingle itself.

"It is chiefly, however, when the gusty winds called 'norths,' on the south-side cold and dry, but which here bring up heavy rains often of several days' continuance, speedily convert these streams into powerful torrents, turbid with washings from the shale and laden with the pebbles of the conglomerate, that the birds which then suddenly make their appearance become particularly interesting. The river subsides, from the great breadth of soil it has covered as it approaches the coast, almost as quickly as it rose. Little pools are left in the shingles, and in these are imprisoned one or two species of Crustacea which crawl and hide amid the pebbles of black trap, porphyry, dark blue limestone, green serpentine, red syenite and granites of different grays, of which it is composed. Shoals of little fish glance and glide or dash round their narrow bounds, rippling the surface in their alarm. Though supplied by rains and dews these speedily dry up, but the retreating river still leaves more, and thus very considerable numbers of these little creatures are exposed to a lingering death, unless means were provided for their more speedy and less painful destruction. These pools, only six inches or less in depth, do not seem suited to the kingfisher (*Ceryle Alcyon*) which abounds on the Wag Water. I never saw them fishing but in much deeper water, which the force of the plunge evidently requires, that the bird should not injure itself. The Scolopacidæ and Charadriadæ appear only to run through them and search for prey much more minute. But to the beautiful group of Ardeadæ, which then appear in numbers, they seem exactly suited; as soon as the 'norths' set in they come. As the rivers rise and then recede, they may be seen in numbers scattered along the banks. If, as this year, the rains speedily cease, not one will be found where a dozen might have been counted before; they disappear entirely. The largest of the group is the great heron (*Ardea Herodias*), which, however, though it increases in numbers during the rains, seems a permanent resident, at any rate during the months I have been here.

"I had before only seen it flying out at sea at some distance, or over some impenetrable morass of great extent. But here they are by no means so uncommon, though still extremely wary. In open situations, as these beds of river shingle, their great height gives them so commanding a view, it is impossible to approach unperceived. They rise with slow beats of the immense wings, alight a hundred yards off, and then, erect and exactly fronting the intruder, watch his movements. If disturbed a second time they rarely alight again within sight. After some time a negro succeeded in shooting one for me. The chief dimensions were as follow:—Length 47 in.; expanse 73½ in.; height, when placed in a standing position as natural as possible, 49 in.: the stomach contained only a little muddy matter, gritty to the touch, and several sets of the wings of our largest Libelluladæ, showing they do not despise insect-prey: the mandibles still grasped an eel about eighteen inches long, the head (much bruised and the bones broken) foremost down the throat. For some time past one has frequented this valley, but has always eluded my most carefully planned attempts to get a shot. It seems always on the watch, and, after one delay, rarely fails to take a wide sweep, and slowly floats to the topmost boughs of a lofty tree at the base of one of the shale precipices, and there waits till danger disappears. About a fortnight ago it was joined by another. They keep close together, and seem, as they come slowly flapping low over the river, to take up its whole breadth. I may remark they always curve back the neck when flying, and never proceed to considerable distances with the neck outstretched and legs hanging, as the egrets will often do. They are exceedingly regular in their habits of visiting particular spots at certain hours of the day, and this for many days together. I have latterly, from indisposition, been unable to carry my gun or go out, except in the cool of the day, for the delicious half-hours which precede and follow the sunsets of the tropics. In riding along the road towards the narrow gorge, through which the river breaks into the valley, I regularly saw these birds in the middle of the stream where the water rippled over a shoal. No artifice I could adopt enabled me to approach them. If I went on along the road they watched me, as I observed they did many groups of negroes, but remained; but if I stopped they were off. At last one evening I did not see them: I approached the river to search, my position being on the high bank of ancient alluvium; the opposite bank of river-shingle low and shelving. Suddenly one came round a bend of the river and alighted a yard or two from the water on the opposite bank: I happened to be there first; its distance from me might be about fifty yards. The bird immediately drew itself up in the attitude of suspicion, so extremely erect, I think my estimate of height is a few inches too little. It stood perfectly motionless and exactly opposite. This position is doubtless assumed that both eyes may be brought to bear, but it seemed to me singularly to disguise the bird, the loose tuft of feathers on the breast hiding the compressed body from view. The mingled white and reddish brown of the extended neck, the height, the stillness so unlike a bird, conjoined,—it might easily at that distance have been taken for some other object, a dry bamboo, for instance, stuck in the shingle. I allowed my horse to graze, and its suspicions seemed allayed, for it walked deliberately into the water, and then without stopping into the middle of the stream. It was now only about forty yards off. It took a position a little below a shoal and facing the stream (a constant habit on the two or three occasions I have been able to observe), tucked up its large wings and began to fish. Its body was not so erect as when watching on shore, but the neck was kept upright and stiff, only the lower cervical vertebræ apparently moving on each other, as like a long arm it was slowly moved from one side to the other, as any object in the water attracted the bird's attention. This motion was very singular and uncouth, but perhaps we may trace in it the mode in which every advantage is retained of the commanding height, evidently made so important a point in the structure of the bird so as to gain the most extended view possible of the water beneath, whilst the slow movement would prevent alarm in adjacent prey. It was standing in about six inches of water. It suddenly stopped, regarded intently a point two or three feet in front, advanced two or three steps, crouched so that the breast touched the water, the neck forming a sigmoid curve, and then made two or three rapid snaps in the rippling water, and I could see something swallowed — small fishes probably. It then resumed the same manœuvres, and in a few minutes a much larger object was taken, which I immediately recognised to be an eel about eighteen inches long. With this it flew with a stroke or two of the huge wings to the shingle-bank, and there proceeded to despatch its prey, holding the head and jerking it violently with the action common to birds. The body was held low and stooping, the neck bent in graceful curves. The last rays of the sun glowed on its sombre but not inelegant plumage, and glistened on the shining coat of its struggling prey; the whole, on the patch of bare shingle with its scanty weeds, forming one of those wild scenes of Nature which have a charm about them impossible to describe.

"The great white heron (*Egretta leuce?*) is not much less in size, but so far as my observations hereabouts have extended, is only a transient visitor during the heavy rains. Towards the latter end of October and beginning of November their stately forms might be seen here and there at the margin of the little rivers, where they cross the belt of swamp all along the coast. In this valley I never saw more than two. The one I shot, a female, proved smaller in dimensions than the male procured last spring in Vere. Instead, however, of keeping to the river as the great heron (*Ardea Herodias*), they were particularly fond of walking gracefully round the edge of the little glassy pools among the pebbles, or standing motionless over their own fair shadows watching the movements of the shoals of little fish. They crouch as the preceding species, so that the breast touches the water, and then, darting the head in different directions, snap up their prey with great rapidity. It was whilst doing this I succeeded in approaching near enough to shoot this wary bird. Their habits, in other respects, greatly resemble those I have detailed of the larger bird. They rise at a great distance, stop to watch at about one hundred yards, and then, if disturbed, the almost constant habit of the bird I saw most of was to circle slowly till it reached a withered bough of a tall solitary tree, in one of the pastures, and there, as conspicuous an object as dazzling white plumage in the blaze of a tropical mid-day could make it, maintain a vigilant look out. Towards evening he might again be seen floating over the windings of the river in search of a fishing-ground. The season since this period has been unusually dry and fine, and I have seen nothing more of them. Notwithstanding their size, they do not seem to reject very small insect-prey, as I found the stomach to contain the elytræ of water-beetles as well as small Crustacea and a small species of Gobius.

"The next in size is a much less bird, but snow-white also. The bill is black all but the base, which, like the skin of the face, is bright yellow. The tarsi are black in front, behind of the same colour as the toes, a greenish yellow. This I presume to be the species you have identified as Egretta candidissima. The occipital, scapular and dorsal plumes are more filamentous than with the other two white species, and give a lace-like appearance to the snowy plumage extremely beautiful. It is the only one of our Ardeadæ (except perhaps occasionally E. cærulea) which can be said to be sociable, and it is so to a great degree. I never fell in with it at all in the South-West; but about Milk River and the Great Morass called

Portland Salina, in Vere, they were numerous, and I saw them not unfrequently floating in lines of ten or twelve against the bright morning sky. In October I fell in with a flock of six, reposing on the mangroves of the great lagoon near Dry Harbour, and all along the coast of St. Ann's and St. Mary's they were to be met with wherever the locality was suitable. Here they appeared in the same flocks and carried their associating tendencies so far as to admit other species into their company. I first observed this in a little flock, with a blue egret (*E. cærulea*) among them, which I pursued some time in a boat on the lagoon behind Annotto Bay; the darker bird flew and alighted with them exactly as one of the rest. And here on the Wag Water I frequently saw them in close company with E. leuce, a giant in comparison, and thus four or five of these beautiful birds of two species stepped stately in various graceful attitudes round the same bright bit of water. The stomach of one I dissected contained the little freshwater prawns; the posterior portion of the œsophagus acts as a crop, and was distended with a mass of about seventy or eighty of them. Their visit here is also transient just during the rains.

"The third white species is your E. nivea, easily distinguished from the last two by the ashy tips to the wings, the colour of the bill and feet; and it is scarcely less so by its habits. I never saw it but quite solitary, though several might be fishing within short distances of each other. It is much more numerous and far more fearless than the other species, and is thus easily approached and shot. During the rainy season it is by far the most widely-distributed: scarcely a cattle-pond is without its occasional visitant. I found this solitary bird on the stream which flows through the small amount of cleared land round Freeman's Hall, the more remarkable as the extensive forest all round offers no other suitable localities; except a bird now and then to be seen near the morass, it has disappeared as the rest.

"Blue Egret (*Egretta cærulea*). Though the deep lavender-blue and empurpled neck render its plumage a contrast to the last three species, it is not less beautiful. It was tolerably common during the rains, and I have seen a solitary bird once or twice about the lagoons. But in Vere I found it not uncommon during the driest weather. Along the Milk River, as late as April, it still associated in little companies of three or four, which would rise with legs hanging and necks stretched to alight a few hundred yards further on, as the approach of the canoe disturbed them. I found the stomach of a bird shot immediately after, a specimen of Egretta candidissima, to contain precisely the same food, freshwater prawns.

"Of that very common species, Herodias virescens, I have very little to add to your remarks, except that it perhaps is here unusually abundant, even little splashes in the pastures being tenanted. The tarsi are in proportion much shorter than with any of the above species, and it always prefers a sedgy, or at any rate grassy, margin. I have never observed it or Egretta cærulea or the great heron (*Ardea Herodias*) fishing in the open pools of the river-shingle. May we not ask whether the total absence of colour in the snow-white egrets may not better fit them to watch for prey with success in such clear transparent shallows than the darker plumage of the other species? And there seems another reason why we may conclude it is of some very absolute service to the bird, as it seems very greatly to increase its danger during its motionless occupation. I have often been surprised at how great a distance they were visible at their posts down the river-margins, a distance at which it would have been extremely difficult to detect the far larger Ardea Herodias. Ardeola exilis is extremely common, but about the jungle of the swamps only; I have never seen it on the Wag Water.

"W. Osburn.

"To P. H. Gosse, Esq."

A Sea Serpent in the Bermudas.—I beg to send you the following account of a strange sea-monster captured on these shores, the animal being, in fact, no less than the great sea serpent which was described as having been seen by Captain M'Qubae, of H.M.S. 'Dædalus,' a few years since. Two gentlemen named Trimingham were walking along the shore of Hungary Bay, in Hamilton Island, on Sunday last, about eleven o'clock, when they were attracted by a loud rushing noise in the water, and, on reaching the spot, they found a huge sea-monster, which had thrown itself on the low rocks, and was dying from exhaustion in its efforts to regain the water. They attacked it with large forks which were lying near at hand for gathering in sea-weed, and unfortunately mauled it much, but secured it. This reptile was sixteen feet seven inches in length, tapering from head to tail like a snake, the body being a flattish oval shape, the greatest depth at about a third of its length from the head being eleven inches. The colour was bright and silvery; the skin destitute of scales, but rough and warty; the head in shape is not unlike that of a bulldog, but it is destitute of teeth; the eyes were large, flat, and extremely brilliant; it had small pectoral fins and minute ventral fins, and large gills. There were a series of fins running along the back, composed of short, slender rays, united by a transparent membrane, at the interval of something less than an inch from each other. The creature had no bone, but a cartilage running through the body. Across the body at certain intervals were bands, where the skin was of a more flexible nature, evidently intended for the creature's locomotion, screw-like, through the water. But its most remarkable feature was a series of eight long thin spines of a bright red colour springing from the top of the head and following each other at an interval of about one inch; the longest was in the centre: it is now in the possession of Colonel Munro, the acting governor of the the colony; and I had the opportunity of examining it very closely. It is two feet seven inches long, about three-eighths of an inch in circumference at the base, and gradually tapering, but flattened at the extreme end, like the blade of an oar. The shell of these spines is hard, and, on examination by a powerful glass, appeared to be double, some red colouring matter being between the shells; the outside, which to the touch and natural eye was smooth, being rough and much similar to the small claws or feelers of the lobster or crayfish. The centre was a white pith, like an ordinary quill. The three foremost of these spines were connected for about half their length by a greasy filament; the rest being unconnected, the serpent had the power of elevating or depressing this crest at pleasure. The serpent was carefully examined by several medical and scientific gentlemen; the head, dorsal spine, and greater part of the crest are in the possession of J. M. Jones, Esq., an eminent naturalist, who will, doubtless, send home a more learned description of this "wonder of the deep." I regret that the immediate departure of the mail for England prevents my preparing you any more careful drawing of this "great sea serpent" than that I enclose.

[Written by Captain Hawtaigne, of Her Majesty's 39th Foot. I place implicit reliance on the narrative, except as to the animal being identical with that seen by Captain M'Quhae, of which I think there is no evidence. Mr. J. M. Jones is an old subscriber to the 'Zoologist,' and a most intelligent naturalist; but the query occurs to me, "Is not *this* sea serpent a ribband fish?"—*E. N.*]

Proceedings of Societies.

ENTOMOLOGICAL SOCIETY.

Anniversary Meeting, January 23, 1860.—H. T. STAINTON, Esq., F.L.S., Vice-President, in the chair.

The Chairman read a letter from the President of the Society, Dr. Gray, stating his absence was caused by indisposition.

Messrs. J. W. Douglas, W. W. Saunders, F. Walker and J. O. Westwood were elected Members of the Council, in the room of Messrs. J. S. Baly, F. P. Pascoe, F. Smith and G. R. Waterhouse.

J. W. Douglas, Esq., was elected President; S. Stevens, Esq., Treasurer; and Messrs. Edwin Shepherd and Edward W. Janson, Secretaries.

The Chairman delivered an address on the present state and future prospects of the Society and Entomology, for which the Meeting passed a cordial vote of thanks.

Mr. Saunders, one of the Auditors of the Treasurer's accounts, read an abstract thereof, and congratulated the Meeting on the favourable state of the Society's finances.

The Report of the Library and Cabinet Committee, adopted by the Council as its Report to the Society, was read and received.

A vote of thanks was passed to Dr. J. E. Gray, the retiring President, for his services to the Society during his period of office.

A vote of thanks was also passed to the retiring Members of the Council.

February 6, 1860.—J. W. Douglas, Esq., President, in the chair.

Donations.

The following donations were announced, and thanks ordered to be presented to the donors:—'The Zoologist' for February; presented by the Editor. 'Notes on the Silkworms of India,' by Capt. Thomas Hutton; by the Author. 'Synopsis of the known Asiatic Species of Silk-producing Moths, with Descriptions of some New Species from India,' by Frederic Moore, Assist. Museum India House; by the Author. 'Stettiner Entomologische Zeitung,' 1859, Nos. 10—12; by the Entomological Society of Stettin. 'The Journal of the Society of Arts' for January; by the Society. 'The Literary Gazette' for January; by the Editor. 'Farm Insects,' Part 8; by the Author, John Curtis, Esq., F.L.S. 'Nouveau Guide de l'Amateur d'Insectes, par plusieurs Membres de la Société Entomologique de France'; by H. T. Stainton, Esq. 'An Address delivered at the Anniversary Meeting of the Entomological Society of London, on Monday, January 23, 1860'; by H. T. Stainton, Esq. 'Notice of the Presentation of the Hope Collections to the University of Oxford'; by J. O. Westwood, Esq., M.A., &c.

Election of a Subscriber.

Arthur E. Crafter, Esq., of Tokenhouse Yard, was balloted for and elected a Subscriber to the Society.

Exhibitions.

Mr. W. W. Saunders exhibited two fine Orthoptera, a Phasma from New South Wales, and a Gryllus from Peru, both insects being entirely covered with diverging spines.

Mr. Stevens exhibited specimens of a species of Coccyx allied to C. strobilana, *Linn.*, but much larger; he had recently bred them from cones of Conus Benthammiana, received from California.

Mr. Waterhouse exhibited specimens of a species of Bembidium, which he stated he had had in his collection for many years separated as a distinct species, but hitherto had been unable to identify with any description. The insect in question greatly resembles the Leja lampros of our collections, but differs in being shorter and broader, and in having the antennæ entirely black; the legs, moreover, are entirely black, or with a mere indistinct trace of rufo-piceous in the tibiæ; the head is broader than that of L. lampros, the frontal ridge relatively much broader, and the lateral sulci less strong; the thorax is broader and relatively shorter, less contracted behind, the sides more strongly rounded, and here the rounded outline is continued almost to the posterior angle. In B. lampros the side is distinctly sinuated at a greater distance above the angle, and the angle thus becomes prominent and somewhat acute, whereas in the insect exhibited the angle is a right angle; the transverse depression on the back of the thorax is less strongly marked, and the lateral foveæ are smaller; the elytra are shorter, more ovate, and more convex; the striæ scarcely differ, excepting that the punctures are a little less strong.

Mr. Waterhouse has no note of the locality of the original specimens of his collection: he had recently seen the insect in a box of Coleoptera sent by Mr. J. C. Dale to be named, and he had procured two other specimens from a collection which formerly belonged to Mr. Walker, of Mansfield.

Upon a former occasion, in attempting to identify this insect with descriptions, he had considered the account given by Gyllenhal of the colour of the legs in his B. nigricornis was such as to preclude the identification of the present insect with Gyllenhal's; but considering that in other respects the description in the 'Insecta Suecica' agrees with the insect exhibited, he was now inclined to apply the name "nigricornis" to the species, and to suppose that the discrepancy was more apparent than real as regards the colour of the legs.

Mr. Janson exhibited five species of Coleoptera not hitherto recorded as inhabitants of Britain, and made the following remarks concerning them:—

Quedius truncicola, Fairmaire, Faune Ent. Franç. i. 538, 14 (1856). Nearly allied to Q. fulgidus, F., and bearing a very close resemblance to Erichson's var. 3 ("niger, pedibus piceis, abdomine rufo-brunneo basi nigricante"), but from which it may be distinguished by its punctured scutellum. I captured the two specimens exhibited, the only individuals I have yet seen, under bark of elm; one near Tottenham, on the 29th October, 1848, the other near Hampstead about a fortnight since. In the first of these the punctures on the scutellum are so few and ill defined as to be scarcely perceptible.

Haploglossa rufipennis, Kraatz, Naturgesch. d. Ins. Deutschl. ii. 81, 3 (1856). Distinguished from its near ally, H. pulla, Gyll. Eric. Kraatz, by its more parallel form, closer and much finer punctuation, and the colour of the elytra, which are red, with a dark patch in the region of the scutellum, and at the outer posterior angles. Found by Mr. Wollaston in sand-pits on Reigate Common, on the 26th June, 1857, and by myself in brushing in the same place on the 6th July, 1859.

Cryphalus Fagi, Fab. A single individual taken by myself, at Hampstead, on the 31st July, 1859, amongst the refuse of a stack of faggots. The narrow subcylindrical form, long elytra, prominent tubercles or processes on the anterior portion of the thorax, and red legs and antennæ, distinguish this species. Mr. Gorham informs me that he has recently found some numbers of a Cryphalus in bark of beech, at Westerham, Kent, and which will probably prove to be specifically identical with the example now before the meeting.

Cryphalus Abietis, Ratzeb. Two specimens given me by the Rev. A. H. Matthews, by whom they were taken from bark of firs, in the vicinity of his residence at Gumley, Leicestershire. Distinguished by the tubercles on the anterior portion of the thorax being few in number and irregular in their distribution (not in concentric rows), the regular striæ of punctures and the short pubescence of the elytra. The legs and antennæ are red; the club of the latter pitchy black.

Anthicus bimaculatus, Illiger, Schmidt, de Laferté, *var. β*. A single example, given me by Mr. Joseph Chappell, of Pendleton, near Manchester, by whom it was sent up to me, together with a number of other Coleoptera for determination, and who informs me that it was taken during the past summer on the Lancashire coast. Readily distinguished from all the species of the genus yet ascertained as indigenous to Britain, by its large size, pallid hue and obovate convex elytra. The normal form, that first described by Illiger, has a triangular black dorsal spot on each elytron a little behind the middle, but of this in the specimen exhibited there exists scarcely any indication. M. de Laferté, Monogr. des Anthicites, 149 (1848), remarks "that the individuals from the shores of the ocean are generally paler than those from the eastern countries of Europe, and that those from the coasts of France and Belgium are entirely destitute of the discoidal spot."

Mr. Janson also exhibited the following rare species:—

Philonthus fuscus, Grav. Taken by himself in a boletus on an ash, near Hornsey, Middlesex, on the 19th ultimo.

Oxylaemus cylindricus, Panz., Eric.. Found by Turner about ten days since, in bark of oak in the New Forest, near Brockenhurst.

Tomicus monographus, F. The male, apparently very rare, conspicuous by having the anterior margin of the thorax triangularly produced with the apex recurved; found by Turner at the same time and under the same circumstances as the foregoing. Erichson (Naturgesch. d. Ins. Deutschl. iii. 284, 1845), adds to his description of Oxylaemus cylindricus: "In oaks, rare. Found by Professor Ratzeburg and myself in the burrows of Bostrichus monographus." It is therefore interesting to find the two species associated in this country.

Platydema violaceum, F. Likewise taken by Turner, under bark of oaks, at the same time and in the same locality as the two preceding.

The President remarked that he had himself taken Philonthus fuscus, under bark of trees infested by the larvæ of Cossus ligniperda, and Mr. Shepherd stated that he also had met with this species in similar situations.

Mr. Sealy exhibited a beautiful series of varieties of Colias Edusa, including the white female variety (Helice, *Hub.*), and examples forming links from it to the typical insect: also a specimen of Sphinx Pinastri, said to have been captured by a young entomologist whilst flying about a fir-tree at Romsey, Hants.

The President remarked that, with the exception of the specimens said to have been received by the late Dr. Leach many years ago from the neighbourhood of Edinburgh, there was no record of the capture of this species in Britain, although so abundant in many parts of Europe; he inquired of Mr. Sealy whether there was any likelihood of the specimen exhibited being a foreign example which had been inadvertently placed amongst insects from the locality mentioned.

Mr. Sealy replied that the reputed captor had some time previously visited Switzerland, and there taken a few insects, but he was assured that the S. Pinastri was not one of the Swiss captures; moreover, he (Mr. Sealy) believed that country was not a locality for S. Pinastri.

Mr. Stainton observed that Mr. Sealy was mistaken, as the insect is well known in Switzerland; it was, however, only fair to state that from his knowledge of the habits of S. Pinastri on the Continent, he considered the neighbourhood of Romsey a very likely spot for the occurrence of this species.

Mr. Stevens exhibited specimens of four species of Lomaptera sent from Batchian by Mr. A. R. Wallace; he also communicated the following by Mr. A. R. Wallace:—

Note on the Sexual Differences in the Genus Lomaptera.

"Lacordaire says in his 'Genera' that the Lomapteræ offer no sexual distinctions, except slight variations in the legs; and in the generic character he adds 'the fore legs are three-toothed in both sexes or in the females only.' In four species of the genus which I have recently taken in the Gilolo group of islands, I have, however, observed very strongly marked sexual differences, and I have had the good fortune to confirm them by capturing pairs of two species *in copulâ*. These differences are as follows:—

"1st. The males have always a distinct longitudinal furrow or depression on the under side of the abdomen, which in the females is quite smooth or rounded.

"2nd. The males have one tooth less than the females on the outside of the anterior tibiæ. In the two larger species the males have two and the females three teeth; in the two smaller species the males have but one (terminal) tooth, the females two teeth.

"3rd. The pygidium in the males is simple, with the extremity somewhat obtuse. In the females it terminates in a sharp reflexed edge, and in the two smaller species is swollen and compressed above and very concave beneath, while in the males it is a simple ovate cone equally rounded above and below.

"It is probable that these characters exist in all the species of the genus, and may enable persons possessing series of Lomapteræ to pair their specimens. I may here remark that the species of this genus are very closely allied, and at the same time very limited in their range. In Ternate and Gilolo, and in Kaiòa and Batchian,—islands only ten or fifteen miles apart,—are found distinct but closely allied species, differing so slightly (although constantly) that they would be infallibly considered as very trifling varieties, if single specimens of each only were examined. Differences of colour exist in specimens from the same locality; while minute differences of form and sculpture mark these representative species of adjoining islands."

Mr. Gloyne read descriptions of some new species of Lema.

Mr. Stainton read 'Descriptions of South-African Tineina collected by R. Trimen, Esq., in 1858—59.'

Mr. Tegetmeier announced the death, on the 31st ult., of Dr. Edward Bevan, of Hereford, one of the original Members of this Society, and author of that well-known work, 'The Honey Bee,' at the advanced age of 80 years.

March 5, 1860.—J. W Douglas, Esq., President, in the chair.

Donations.

The following donations were announced, and thanks ordered to be presented to the donors:—'The Journal of the Royal Agricultural Society of England,' Vol. xx. Part 2; presented by the Society. 'Journal of the Asiatic Society of Bengal,' No. 99; by the Society. 'Journal of the Proceedings of the Linnean Society,' Vol. iv. No. 16; by the Society. 'The Zoologist,' for March; by the Editor. 'Saggio di Ditterlogia Messicana, di Luigi Bellardi, Professore di Storia Naturale,' Part 1; by the Author. 'Mémoires de la Société de Physique et d'Histoire Naturelle de Genève,' Tome xv. 1re Partie; by the Society. 'The Journal of the Society of Arts' for February; by the Society. 'The Literary Gazette' for February; by the Editor. 'The Athenæum' for February; by the Editor. 'The Entomologists' Weekly Intelligencer,' Nos. 171—179, inclusive; by the Editor, H. T. Stainton, Esq. 'Stettiner Entomologische Zeitung,' 1860, Nos. 1—3; by the Entomological Society of Stettin.

Election of Members.

Dr. Schaum and Mons. Leon Dufour were elected Honorary Members, and Mons. J. Bigot, Vice-President of the Entomological Society of France, of Rue de Luxembourg, Paris, an ordinary Member of the Society.

Exhibitions.

Mr. Stevens exhibited a large box of Coleoptera sent from Batchian by Mr. A. R. Wallace; it contained a vast number of new species, some beautiful Buprestidæ, &c.

Mr. Janson exhibited a box of Coleoptera he had just received from Mr. C. Turner, collected by him during the last few weeks at Rannoch, Perthshire, and remarked that no less than four of the species were not comprised in Mr. Murray's 'Catalogue of the Coleoptera of Scotland,' viz., Xyloterus domesticus, *Linn.*, Tomicus acuminatus, *Gyll.*, Cis Alni, *Gyll.*, and Bradycellus placidus, *Gyll.*

Mr. Dunning exhibited a singular pale Noctua, which had been pronounced by Mr. H. Doubleday to be a variety of Mamestra anceps.

Mr. Dunning also read a letter addressed to him by C. Maurice, Esq., respecting the specimen of Sphinx Pinastri exhibited by Mr. Sealy at the last Meeting of the Society, in which the writer asserted positively that the insect in question was caught by him at Romsey, as then stated by Mr. Sealy.

The Secretary also read a letter addressed to Mr. Sealy by S. H. Maurice, Esq., brother of the before-named gentleman, who had, as mentioned at the February Meeting, taken some moths in Switzerland during the past summer: in this letter the writer states that he feels certain the moth in question was not one of his Swiss captures, but was caught by his brother at Romsey, after his return from Switzerland.

Mr. Westwood made some observations on the usefulness of labelling insects at the time of capture, by which such instances of disputed identity as the present were avoided; he objected to the plan of employing a number referring to a note-book as commonly in use, as, in the event of dispersion of a collection on the death of the owner, such numbers became useless to all but the possessor of the note-book, and in [illegible] instances had come under his notice in which the said book had been lost. He h[illegible] always employed in his collection tickets bearing an abbreviation of the locality, a[illegible] W. for Coombe Wood.

The President feared that Mr. Westwood's plan of abbreviations would be rather perplexing to any one but himself, unless accompanied by an index, which would be open to the same objections as the note-books which he had just condemned.

Some conversation ensued on the claims of Sphinx Pinastri to be considered a British species; during which Mr. F. Walker reminded the Meeting that Mr. Thomas Marshall, well known to many Members present as one of our most accurate observers, had himself seen this insect alive in Cumberland, and had recorded the fact in the 'Entomologist' some years ago.

Dr. Wallace exhibited two examples of Acosmetia caliginosa, taken by Mr. Grimstead in a wood near Ryde, Isle of Wight: he observed that the species had hitherto only been captured in this country in the New Forest.

The Secretary read the following paper by Mr. G. Wailes, of Newcastle :—

The Hybernation of Vespa vulgaris.

"It is very evident that we have a great deal yet to learn about the social wasps, and therefore the following remarks as to Vespa vulgaris may be interesting. Ever since 1829 I have, at intervals, searched the summit of Skiddaw (3022 feet) for specimens of Leistus montanus, and on every occasion have taken out from underneath the loose fragments of the slate perfectly torpid females of this wasp, with the wings, legs, antennæ, &c., precisely in the state in which we find them during winter in the lower lands. Not unfrequently I have met with dead specimens which seemed to have perished in the same dormant state, and been there for a year or two at least. Mr. Smith, in his 'Catalogne of the British Vespidæ,' under this species, states that 'Mr. Wollaston found the female abundant under stones on the extreme summit of Gribon Oernant, near Llangollen, in September, 1854,' adding 'probably hybernating for the winter,' but had evidently forgotten my writing him on the same subject. My visits to the mountain have extended from the latter end of June to the latter end of August, and therefore it necessarily follows either that these specimens of the female wasp were those of the previous year, or that this sex appears much earlier in the season than has been hitherto supposed. But in either case, the question arises why are they torpid during these the hottest months of the year? It is quite true that the temperature at the altitude is below that of the plains, especially during the night, and I have myself been enveloped in falling sleet and snow more than once, both in June and August, though as a rule the Cumberland mountains seldom have a thick covering of snow, and often only a few inches once or twice in a winter. Still, the temperature of ordinary mountains always approaches that of the plains in summer, and one would have expected was in Britain at least sufficiently high to rouse these wasps in their winter quarters, when every other insect under the same stones was active and stirring, and the air so warm and bright that Larentia salicata and Crambus furcatillus were sporting in the mid-day sun above them. Such, however, was not the case, and when turned out of their snug, dry quarters, they allowed themselves to be handled and put into pill-boxes just as they do in winter. We may therefore ask, when are these sleepers to awake? for as the ground temperature reaches its maximum during the months in which I have met with them, and Mr. Wollaston has found them in a similar state in September, when a declining temperature has set in, we must conclude that for that year all prospect of their subsequent issue from their retreats through the influence of heat is barred. Can this be called hybernation as it is usually understood? Or is there some other cause of torpidity besides mere cold? Or are we to conclude that when once put to sleep in these lofty regions they wake no more unless kindly removed into a milder clime by a stray entomologist, when, as I have always noticed, they become as active as those of the warm lowlands?

"I have searched in vain for the record of similar facts in other parts of Europe, where, doubtless, the same circumstances occur, and therefore I send this note to the Society with the hope of calling the attention of others to the subject."

Mr. Westwood considered that these female wasps had been the founders of colonies in the preceding spring, and after performing their maternal duties, had retired to die in the situations in which they were found by Mr. Wailes.

Mr. H. W. Bates communicated the following

Diagnoses of three New Species of Diurnal Lepidoptera belonging to the Genus Agrias, and of one belonging to Siderone.

"Wishing to dedicate one of the grandest new species of Agrias (a genus which he has done so much to illustrate) to Mr. W. C. Hewitson, I send the diagnosis for insertion in the 'Report of the Proceedings of the Entomological Society' for March, preparatory to the figures which Mr. Hewitson will publish in the April part of his 'Exotic Butterflies.' I add the diagnoses of two other new species which will be figured on the same plate, as well as of a species of Siderone, intended to be figured at some subsequent early date. All four species were taken by myself on the Upper Amazons, and belong to the most beautiful productions of that wonderful country. The discovery of the female of one of the species makes the present communication of some importance in a scientific point of view; as the non-appearance of females with the usual Nymphalideous structure of the fore legs in that sex, in the genera Agrias and Megistanis, seems to have excited doubts as to the constancy of that sexual character throughout the whole family, especially as two forms of males have occurred in some species having the usual superficial appearance of the two sexes (*e. g.* in Megistanis Bæotus). But the discovery of the females in the allied genus Agrias shows that the sexual character in the fore legs is precisely of the same nature here as in the rest of the family Nymphalidæ. The four species now characterized will be included in the 'Insect Fauna of the Amazon Valley, Part Diurnal Lepidoptera,' now preparing for publication.

"AGRIAS HEWITSONIUS.

"♂. Size of A. Phalcidon (Hewits. Ex. B.) *Above.* Black. Fore wing having at the base a large orange-coloured spot, rounded on its outer edge; followed by a broad belt of dark blue, extending from the costa to very near the hind margin; edged externally by a belt of six pale greenish lunules. Near the apex is a short belt of three dusky white lunules. Hind wings with a large subtriangular spot on the disk, occupying about half the surface, of the same blue colour as the fore wing.

"*Beneath.* Fore wing has an orange-coloured spot similar to the one on the upper side; the apex is of a pale greenish gray; the intermediate part of a dull black. Hind wing: the base to nearly the middle orange, the outer edge of the patch deeply sinuated in the middle. Rest of the wing pale greenish gray; a submarginal line, a central strongly curved macular belt, interrupted at the first median nervule; two short ones across the disk, and two spots in the middle of the cell, black. Between the central and submarginal belts is a row of seven large, equal, black ocelli, having white pupils (double in the anal one) and shining blue irides. Body above rufous-brown. Antennæ black. The female is considerably larger and less brilliant in colour, having also less blue colour on the disk of the hind wing.

"I took four specimens of this distinct species, at Ega, one male and three females. It is a very bold and rapid flyer, similar to the Preponæ and the Apaturæ of the old world. It is attracted, as well as one of the following species, by the sugary sap exuding from certain trees in the forest, where I have seen it feeding amongst a group of Incas and Cetoniadæ.

“AGRIAS PERICLES.

“♂. Very similar in size and outline to A. Phalcidon. The hind wing, both above and beneath, offers not the slightest difference; the fore wing differs as follows: — *Above.* Fore wing black: the basal portion, to about two-thirds the length, occupied by a large spot of a beautiful scarlet colour inclining to orange. This is followed by an oblique belt of five elongated spots of a metallic-green colour, edged on the inner sides with brilliant dark blue. Towards the apex is a narrow belt composed of four small cream-coloured spots.

“I took one individual only of this species, in company with A. Phalcidon, at Villa Nova, in 1854. The specimen has travelled with me from place to place on the Upper Amazons for five years. I have considered it hitherto only an extraordinary variety of A. Phalcidon, but on further experience of the singular way in which species of this genus and of Catagramma differ from each other, I now prefer to consider it distinct. A. Phalcidon was not uncommon at Villa Nova, although I saw not a trace of it at any other locality. It flies high, and I never saw it descend towards the ground. It settled on leaves of trees about fifteen to twenty feet from the ground, in the broad alleys of the glorious forest at that locality, and could only be captured by attaching a long pole to the bag-net.

“AGRIAS SARDANAPALUS.

“♂. In size and shape of wings very similar to A. Claudius, of Rio Janeiro. The under surface of the wings does not differ in any way from that species: above, the colouration is very different. Fore wing black; the basal portion having a large triangular spot (occupying about three-fourths the surface of the wing) of a rich carmine colour, glossed with cobalt-blue, in certain lights. This is followed by a belt of the most beautiful blue colour, leaving only the apex and a narrow outer margin black, the former of which has a short belt of three large indistinct pale spots. Hind wing has the base and the margins narrowly black; the disk entirely of the same rich blue as the belt across the fore wing.

“I took two of this very richly coloured species, one at Ega and one at St. Paulo: one of them is in the collection of Mr. W. C. Hewitson and one in my own. I saw only four individuals during four years' residence and travel on the Upper Amazons.

“SIDERONE MARS.

“♂. Considerably less in size than S. Ide. The fore wing has the apex more more falcate than in that species; the outer margin much more strongly rounded, leaving the hinder angle indistinct; the hind wing also is shorter.

“*Above.* Deep black, with two clear white spots near the apex. A large oblique belt of carmine crosses the wing from the costal edge to near the hind angle; its costal part dilated towards the extreme base of the wing. Hind wing black Two conspicuous rounded red spots near the middle of the costal edge. Anal lobe gray.

“*Beneath.* The base and apex of both wings are of a rich rufous-brown. The discal portion is glossy brownish gray, irrorated nearly throughout with rufous-brown. The hind wing has a broad belt across the middle, of a shining ash-colour, spotless. The apex of the fore wing has a belt of white and lilac-coloured spots.

"I only saw one individual of this species, at St. Paulo, near the frontier of Peru. Like all the other species of Siderone and Paphia, it has the rapid flight of the typical Nymphales, and, like them, not easily scared when reposing, pertinaciously returning to the same spot after being driven away. Its near relative, Siderone Ide, so common in the West Indian Islands and Guiana, also occurs in the country, but is very rare."

The Secretary read the first part of a paper by Mr. H. W. Bates, intituled "Contributions to an Insect Fauna of the Amazon Valley."—*E. S.*

Food-plant of Eupithecia pallidaria.—I posess specimens of this insect bred from larvæ found in Kent, by Mr. Gorham, on Solidago Virgaurea. I think this is the first instance of its having been bred, though I believe that the Rev. Mr. Crewe has it now in pupa.—*R. M'Lachlan; Forest Hill, March* 6, 1860.

Larvæ of Eupitheciæ desired.—If any of the readers of the 'Zoologist' can send me, during the ensuing season, larvæ of Eupithecia rectangulata, or eggs of the following species—E. pulchellata, E. pumilata, E. pernotata, E. pygmæata, E. plumbeolata, E. pusillata, E. consignata, E. constrictata, E. helveticata, E. viminata, E. subciliata, E. irriguata, E. togata, E. indigata, E. debiliata, E. egenata, E. succenturiata (not subfulvata), or Collix sparsata—I shall feel deeply indebted to them, and will endeavour to make them any return in my power.—*H. Harpur Crewe; Wickham Market, Suffolk, March* 6, 1860.

Entomological Terms.—In compliance with the wish of my friend the Rev. Mr. Pickard-Cambridge, I offer a few brief observations on the subject of the entomological terms alluded to by him (Zool. 6893); I fear, however, that I do not possess sufficiently clear powers of definition to throw much light on the subject, and that I have so often myself, when using them, been guilty of laxity and want of uniformity that my authority is worth nothing. I should wish to see a far more accurate and methodical pen than my own engaged in the task, for instance that of my friend Mr. A. G. More. With regard to the terms "very common," "common," "frequent," "not rare," "occasional," "rare," "very rare," it would be alike presumptuous and superfluous in me to add a single word to Mr. Pickard-Cambridge's definition, which are as perfect as they are complete. I therefore proceed to some of the other terms subsequently alluded to by him, giving my own private interpretation thereof. As this is very likely quite erroneous, I hope none of your readers will be sparing in their criticisms. I begin, then, as follows:—*Tribe*, the grand primary division comprehending all the others, and giving a general idea of the thing designated; example, insect. *Order*, a collection of numerous widely-differing groups, but yet possessing certain peculiar characteristics common to all; example, Lepidoptera. *Class* or *group*, a collection of families possessing very similar characteristics; example, Bombycina. *Family*, a collection of various closely-allied genera; example, Notodontidæ. *Genus*, a collection of very closely-allied species; example, Notodonta. *Sub-genus*, one possessing the main characteristics of the genus, but yet, in the opinion of some authorities, sufficiently distinguishing peculiarities to warrant its being separated from it; example, Drymonia. *Species*, each of the one or more distinct individuals which make up the genus or sub-genus; examples, dromedarius, dodonea. *Variety*, a frequent yet abnormal aberration from the typical characteristics of the species, not confined to any peculiar soil or locality; example, Miana strigilis, *Lin.*, var. Æthiops, *Haw.* *Permanent variety* or *race*, a variety confined to particular localities, and hereditary in all its distinguishing peculiarities; example, Noctua conflua, *Tr.*, and Lycæna Artaxerxes, *Fab.*, which by many entomologists (of whom I am not one) are considered more northern varieties of N. festiva, *W. V.*, L. Agestis, *W. V.* *Lusus* or *sport*, an unusual and extraordinary divergence in colour and markings from the typical characteristics of the species; example, a black specimen of Chelonia caja or C. villica, *Linn.* I am almost ashamed to offer these defective and inaccurate definitions to your readers; but, as I said before, I hope no one will hesitate to set me right wherever he thinks I am wrong. One word in conclusion, respecting the term "race" or "permanent variety," which has lately become so common. The opinion which I expressed (Zool. 6247) has in no way altered. As far as Lepidoptera are concerned I do not believe in the existence of these "permanent varieties." I have never heard, read or seen anything which convinced me; and I think the conclusion rests upon most insufficient evidence. We heard a great deal, some two years since, about T. crepuscularia, *W. V.* (laricaria, *Doub. Cat.* 1st ed.) being a race of T. biundularia, *Esp.* (crepuscularia, *Doub. Cat.* 1st ed.), and M. rivata, *Hub.*, a mere permanent variety of M. subtristata, *Haw.* (alchemillaria, *Doub. Cat.* 1st. ed.); but the whole four species have been carefully bred from the egg during the past season, and proved to be indubitably distinct; and I believe that the further and closer experiments are carried the more plainly will the theory be shown to be fallacious.—*Id.*

On the Transverse Fission of Aiptasia Couchii.—Mr. F. N. Broderick's communication to Mr. Gosse on the transverse fission of Aiptasia Couchii (Zool. 6911) is of very great interest, and, I believe, the first recorded notice of that mode of increase in the Actiniadæ. In his 'Actinologia Britannica' Mr. Gosse has properly placed this animal between Sagartia and Anthea, genera in which fissiparous reproduction is frequent, although after different fashions. In Anthea the fission is vertical, separating the polype into two distinct halves, each possessing its share of fully-developed internal and external organs; fissiparous increase in Sagartia, on the contrary, consists of the detachment of little ragged bits, only from the base of the animal, and may be considered as an irregular mode of budding, since the separated parts at first contain no specialised structure, but only the vital power requisite for its development. The division in Aiptasia partakes of the character of both these forms of increase, like that in Sagartia from taking place only at the base, and Anthea-like in being a complete section of the body, although a transverse one; each portion also being to a certain extent complete in itself. With regard to the mode of increase of Aiptasia in the Zoological Society's collection, I think Mr. Broderick must have been misinformed, perhaps by some one who was *locum tenens* for the regular attendant during the important hour of dinner. There are now three specimens of this polype in one of the centre tanks, the two smaller examples being the produce of the other, and, as Tennent, the keeper, has often told me, the result of transverse fission. The first young one was so small and well-proportioned that I could hardly believe it had been produced in any other than the usual manner; but the second had a very different shape. It appeared last August, and when three days old the body was very short and thick, and I could observe traces of budding tentacles at its upper margin. The three polypes now only differ from one another in size. Since the keeper first called my attention to this transverse fission we have frequently discussed the subject, and my scepticism has been gradually diminishing; now, Mr. Broderick's interesting observations, of course, are conclusive on the point.—*E. W. H. Holdsworth; 26, Osnaburgh Street, March* 7, 1860.

NOTICES OF NEW BOOKS.

The 'Ibis,' a Magazine of General Ornithology. Edited by PHILIP LUTLEY SCLATER, M.A. London: Trübner & Co. 1859. 490 pp. Price 21*s*.

THE first four numbers of the above ornithological magazine are now before us, and we have delayed our remarks upon it till the completion of the first volume, partly from a desire to know whether it would continue to maintain the high tone of merit with which it began, before we lavished our commendations, which might have proved premature; and partly from a confident expectation, in which we have not been disappointed, that the fourth number might contain a preface, stating the origin and object and intention of the work. Now, however, that the bark is fairly launched in the waves, and vol. i. of the 'Ibis,' stands forth to sink or swim according to its merits, we would devote a short space to a brief examination of it; and we do not hesitate to state at once that it has our unqualified praise, filling, as it does, just the gap which has so long existed in this country, but which has been ably supplied in Germany by Cabani's 'Journal für Ornithologie,' and Bädeker's 'Naumannia,' *viz.*, that of a sound and scientific periodical, devoted exclusively to Ornithology, and which we have little doubt the large and rapidly-increasing body of inquirers into that fascinating branch of the zoological kingdom will not only amply support but hail with considerable satisfaction. Neither have we any fear for ourselves that the 'Ibis' will in any degree interfere with the 'Zoologist;' for the whole intention and tone of the work is so distinct, and has such a very different aim, grasping, as it does, the Ornithology of the world, and dealing with matters quite irrelevant to our pages, that we see no reason why the 'Ibis' and the 'Zoologist' should not go hand in hand, helping and supporting one another; for while we willingly resign to the sacred 'Ibis' the deeper and more elaborate discussion of material too heavy and scientific for a popular magazine such as the 'Zoologist' especially claims to be, we cannot doubt that we shall still be the receptacle of those many interesting anecdotes and facts with reference to the feathered race, no less than in the other departments of the zoological world, which we have now for seventeen years been the vehicle of conveying to the public; and we have the greatest confidence that our contributions will not fall off in this respect, and that we have so far the good will of the promoters of the 'Ibis' that they regard us with the same friendly feeling which we entertain towards them; and so we are disposed to feel an Egyptian reverence for the "religious fowl," and hail its advent among us with delight.

And now we proceed to state the origin of this new work, which we extract from the preface that its promoters may tell their own story in their own words. It seems that "for some years past a few gentlemen attached to the study of Ornithology, most of them more or less intimately connected with the University of Cambridge, had been in the habit of meeting together, once a year, or oftener, to exhibit to one another the various objects of interest which had occurred to them, and to talk over both former and future plans of adding to their knowledge of this branch of Natural History. These meetings being entirely of a private and social nature, were found agreeable by those who attended them, and gradually became more frequented. In the autumn of 1857 the gathering of naturalists was greater than it had hitherto been, and it appeared that among some of those present there was a strong feeling that it would be advisable to establish a magazine devoted solely to Ornithology." This feeling was distinctly stated not to have been "prompted by any jealousy of periodicals already existing, but by the belief that the number of persons who turned their attention principally to this one branch of Zoology was at any rate sufficiently great to justify an experiment, which in a neighbouring country, and among a kindred nation, had succeeded so well." The scheme suggested in 1857 was reconsidered and approved at the annual meeting at Cambridge, in November, 1858, when, "after due consideration, it was determined by those present that a Quarterly magazine of General Ornithology should be established, that a limited subscription should be entered into to provide a fund for that purpose, and that the subscribers should form an 'Ornithological Union' their number at present not to exceed twenty." The names of these twenty valiant knights who take the Ibis for their standard, and are ready to do battle in defence of their ensign, are appended; and it is but fair to add that they embrace some of the very best of our British ornithologists, naturalists, moreover, of the field as well as of the closet, and who have pushed their investigations and learned their lessons in all parts of the world;— no carpet knights but knights errant in good truth, who have given proof in this first volume of their prowess and brilliant achievements from the icebound coasts of Spitzbergen, and the inhospitable snows of Lapland, to the burning shores of the Red Sea, and the tropical districts of Central America and the West Indies.

To take a rapid glance at the contents of the volume before us, and beginning with Europe, we have a graphic account of the discovery of some nests of the black woodpecker (*Picus martius*) in Sweden, by Mr. Simpson; admirable papers on the breeding of the smew (*Mergus albellus*) and of the crane (*Grus cinerea*) in Lapland, by Mr. Wolley, of which more anon; and notes on the birds of Western Spitzbergen, by Messrs. Evans and Sturge.

Passing on to Africa we are not surprised to find that continent more especially favoured by the devotees of the Ibis, and here we have papers on the feathered inhabitants of the Great Desert of the Sahara and of Northern Africa, generally from the truthful pen of the Rev. H. B. Tristram, who has passed several winters in those localities. Also a narrative of five months birds'-nesting in the Eastern Atlas, by the cosmopolitan, Mr. O. Salvin; Ornithological Reminiscences of Egypt, by Mr. Taylor; and Lists of Birds from Ibadan in Western Africa, and Natal in South Eastern Africa, by Mr. Gurney, than whom no one has a more general knowledge of birds, more particularly of the Raptorial order.

The continent of Asia has hitherto been little noticed by contributors to the 'Ibis,' Mr. Tristram's paper on "Birds observed in Southern Palestine," and Mr. Gurney's "List of Birds of Prey from Beyrout," comprising all from the East, though perhaps there is no field which promises so rich a harvest to future explorers, which has been so little trodden hitherto, and which we trust to see taken in hand by some of the more adventurous members of the British Ornithologist's Union than Asia generally, more especially the districts bordering on the Caspian, and the great kingdom of Tartary.

Crossing the Atlantic, the Western Hemisphere is not without its investigators; first and foremost we have the "Ornithology of Central America" by the excellent Editor (to whom we would pay a passing compliment on his success in nursing the infant 'Ibis' through its first year, no slight task, the delicacy of the bird and our uncongenial climate considered), wherein he has been ably seconded by Mr. Salvin, who is now, for the second time, examining the Fauna of the Central

American isthmus. And again we have some very interesting and well-written notes on the birds of the West Indian island, St. Croix, by the brothers Messrs. A. and E. Newton, both well known and esteemed by the 'Zoologist,' and both of whom have at different periods visited the island they describe.

These are some of the principal contents of the volume, giving an insight into the Fauna of other countries, but they are interspersed with many another paper on kindred subjects, among which we hailed with delight contributions from the well-known pens of Mr. Eyton and Mr. Knox, and the not less valued pencils of Mr. Hewitson and Mr. Wolf, while the short account (with which each number concludes) of recent ornithological publications, abroad as well as at home, leaves nothing to be desired on this head, and amply fulfils the promise of the preface to "keep its readers acquainted with the progress of ornithological science in all parts of the globe."

There is yet another very able article which we cannot pass over, viz., a "Review of Mr. Bree's Birds of Europe not observed in the British Isles." The reviewer begins his task in a business-like manner, and brings considerable ability and general ornithological knowledge of evidently a very high order to bear; but though we admire his masterly handling of his subject, and agree with him in the main, we could have wished a little less severity, and a little more deference to the opinions of others, than such dogmatic assertions and sweeping denunciations imply, more especially when the reviewer bears witness to much excellence in the book, and sums up several pages of severe censure by declaring that Mr. Bree deserves "a very high degree of praise."

We have now touched upon the general contents of the first volume of the 'Ibis,' and we trust we have sufficiently pointed out its sweets to tempt those of our readers who have not already done so to taste and try for themselves. It is not our intention to follow the writers through their several articles, which would be to take an ornithological tour over the four quarters of the globe; neither where so many are deserving of praise would we particularize those papers chiefly worthy of merit, or institute comparisons which are generally odious; one exception, however, we must make, which can provoke no jealousy, when we specify the two very able articles of our highly valued, and now deeply lamented, correspondent, the late Mr. Wolley: his untimely death, for he was cut off in the very flower of his age, must have excited the bitter regret of all true naturalists, even if they did not enjoy his personal friendship; for who that claims to have any sympathy for Ornithology can have been ignorant during the last few years of the name of John Wolley, so highly honoured not only in his native country, but in Europe, as one of the most indefatigable and successful explorers of the nesting of those birds which—seeking the highest Arctic latitudes—have baffled the hitherto cursory researches of former inquirers; and who has been content to encounter, during several seasons, the rigours of an Arctic winter; fixing his abode in Lapland, on the confines of Finmark, for the express purpose of being on the spot for the nesting of the earliest breeders, before the snows had disappeared in the spring, and communication with more southern latitudes was feasible? Truly, not only the members of the "British Ornithologist's Union," but naturalists generally have sustained an irreparable loss in the death of one so zealous in the cause, and withal so acute an observer, so diligent in instituting inquiries, so painstaking in sifting information, so discriminating, so careful in admitting a doubtful point as a fact; above all, so accurate in apparent trifles, the thousand little points which constitute the very soul of all scientific inquiry, and are of such immense importance in arriving at truth, where less laborious research, and too rapid jumping to conclusions are so apt to mislead into a labyrinth of error, and propagate falsehood instead of facts. Now the two papers by Mr. Wolley in the 'Ibis' are admirable proofs of this accuracy and diligence, and we would point them out as especially worthy of imitation, for in addition to their intrinsic value as records of the breeding of birds whose nidification was but little known, viz., the smew (*Mergus albellus*) and the crane (*Grus cinerea*), and over and above the intense interest wherewith Mr. Wolley has contrived to invest his plainly-told statements, there is such a spirit of truthful detail, such evident accuracy pervading each paper, that we may safely assert no one can rise from their perusal with a doubt on his mind that the author can have been deceived in any one particular which he has stated: witness his remarkable caution, we had almost said unwillingness, to admit the eggs brought as those of the smew, and the several links of evidence he picked up, till a chain of proof was formed which left no room for suspicion: witness again his admirable patience and tactics, worthy of a field officer, in mastering by ocular proof all the details of the nesting of the crane. We would again call particular attention to this careful regard to the smallest minutiæ in dealing with little-known facts and in pushing zoological inquiry, as of the last importance in helping to conclusions, and as worthy of all imitation; though we know not where to look for an ornithologist so remarkable in these respects as Mr. Wolley, as assuredly we must long look in vain for one whose mind will be so richly stored with Scandinavian Ornithology, which we had fondly hoped would have proved both to the 'Zoologist' and the 'Ibis' an inexhaustible mine for many years to come, but which will now we fear in a great measure, if not altogether be lost.

But to return to the "Ibis," and to peck at her with little reason indeed, but in the snarling spirit in which critics are said to delight. We have heard the question repeatedly asked, and we have never heard a satisfactory answer, "Why the 'Ibis'?" and "What could have induced British ornithologists to travel out of their way to Egypt for a title, and to assume as their symbol the bird long ago sacred to the worshippers of Isis, and whose name and figure at once and involuntarily lead the mind far away from Britain to the banks of the Nile?" We confess that we share these murmurs of discontent, and could have preferred the designation first suggested of "Aves" as more appropriate and more descriptive of the book; for though the quibble is trifling, and it may be retorted "What's in a name?" and "A rose with any other name would smell as sweet," we own to a decided prejudice in favour of a good nomenclature, and vastly prefer the title which carries its meaning on its face.

With the next grievance which we have heard mentioned we have no sympathy, and we repeat only to refute it; for though some think the price excessive, and the figure 6*s*. looks somewhat high on the cover, especially when the double number (No. 4) was marked 12*s*., yet if we take into account the quantity of matter promised, viz., an annual volume of about 400 pages, and above all the coloured plates, to the number of at least twelve, we feel satisfied that subscribers of £1 1*s*. have no right to find fault, for they receive to the full amount of their subscription; and for ourselves we would infinitely prefer a few really good plates (and there are some admirable ones in the volume before us) to any amount of ordinary ones, executed by less able artists. This year at any rate we can have no room for complaint, for the editor has more than kept faith with the public in giving 490 pages in lieu of 400, and 15 plates instead of 12.

We would only suggest two cautions, and we have done; the first, that the 'Ibis' be punctual in its periodical appearance, not deferring its arrival on the appointed day for any consideration, symptoms of which dilatory lagging we observed in No. 4; and again, that in aiming at a high standard it avoid too prosaic and didactic a tone, remembering that statistical facts may be dry and dull, and require lubrication, a judicious mixture of the *dulce* and *utile*, as that great master of human nature, Horace, suggests; this, however, is a caution we give with considerable diffidence, for let us not be misunderstood to desire any dilution of the matter provided, nor in a purely scientific work would we sacrifice anything to mere popular reading; only let there be a careful and judicious arrangement of the material, and let it be conveyed in a pleasing form and in well-chosen language, minutiæ these often overlooked as of comparatively trifling importance, and yet not to be disregarded even in the most abstruse and scientific disquisitions.

With these friendly remarks we close our examination of the first volume of the 'Ibis,' heartily commending it to our readers, and trusting it will continue in the same masterly manner in which it has begun. A.

BOTANIST'S CORNER.

Question as to the Species of the British Cyclamen.—Botanical subjects do not usually appear in the 'Zoologist;' but, being a Journal which I have long known and constantly read, I wish, if the indulgence may be allowed, to inquire through its pages what species of Cyclamen it is which in a few instances has been found wild in England, or whether we have more than one species? I believe that all our published Floras give it as C. hederifolium of Willdenow; but it appears to me that nearly all of them, since Smith's 'English Flora,' have confounded Willdenow's plant with C. neapolitanum of Prof. Tenore,—that whilst they quote the former as synonymous with theirs, their description is that of the latter. The two species are clearly distinct: in C. neapolitanum the mouth of the corolla is circled with projecting teeth, and its time of blossoming is the autumn; C. hederifolium is without these dental appendages, and blossoms in the spring. The following localities are given in our Floras and other books: Bramfield, Suffolk, on a bank of wet clay; Sandhurst, near Cranbrook, Kent; Stockpole Court, Pembrokeshire; also somewhere in Nottinghamshire, and in Sussex. Hitherto I have failed, by private inquiry and correspondence, to obtain the desired information, except that my friend James Atkins, the originator of the beautiful hybrid Cyclamen which bears his name, has informed me that he has received both leaves and flowers from the Stockpole Court locality, and that they are undoubtedly those of C. neapolitanum. I therefore hope that, through the readers of the 'Zoologist,' some further light on the subject will be, sooner or later, obtained. If the time of blossoming at any place could be ascertained, that alone would be, I believe, sufficient to determine the species for that locality, whilst other localities may produce another species; for though it has been stated that C. hederifolium will sometimes blossom in the autumn as well as in the spring, I believe the statement to be contrary to the experience of all cultivators, and that it is an error which has arisen from the confounding of this species with one or more of the autumnal-flowering species.—*Thomas Clark; Halesleigh, January* 17, 1860.

23 MA60

A FULL DESCRIPTION OF THE SEA SERPENT
(*GYMNETRUS JONESII*)
WILL APPEAR IN OUR NEXT.

Index to Zoologist.—Will Mr. A. G. More kindly explain in full his views as to an Index to the 'Zoologist' on its own wrapper? By doing so he will oblige the Editor, who will thus gain the advantage of other suggestions thereon.—*E. N.*

Mr. Greene's Proposition.—My brief note on the subject of the Rev. Joseph Greene's most complimentary proposition appears to have been regarded by some readers as uncourteous on my part. I regret this should be the case. My feeling against a man's having any complicity in getting-up a testimonial to himself is very strong indeed, and were the wrapper of the 'Zoologist' ever used for such a purpose, even though in the form of a paid advertisement (*verbum sapienti*), I should certainly subject myself to unworthy suspicions. I, therefore, say most distinctly that the 'Zoologist' is hermetically sealed against any communications thereanent. May I add a word more? I shall be obliged if my friends will abstain from writing to me on the subject.—*E. N.*

Death of Mr. Osburn.—Those of your readers who have read, with pleasure and instruction, the Letters of Mr. William Osburn on the Ornithology of Jamaica, will be grieved to learn that the last mail has brought the sad tidings of his death, while on a visit to Raymond Hall.—*P. H. Gosse; Torquay, March* 21, 1860.

The late Mr. Foxcroft.—It is my duty to inform the readers of the 'Zoologist,' that Mr. Foxcroft, so well known formerly as an indefatigable collector of insects for many years in different parts of Great Britain, and lately in the vicinity of Sierra Leone, died at that place on the 6th of February, 1860, of dropsy and disease of the liver, after a long and painful illness. His collections, when not subscribed for, will be disposed of by Mr. S. Stevens. His son, also an invalid, and now in the hospital, will return to England as soon as practicable.—*E. N.*

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